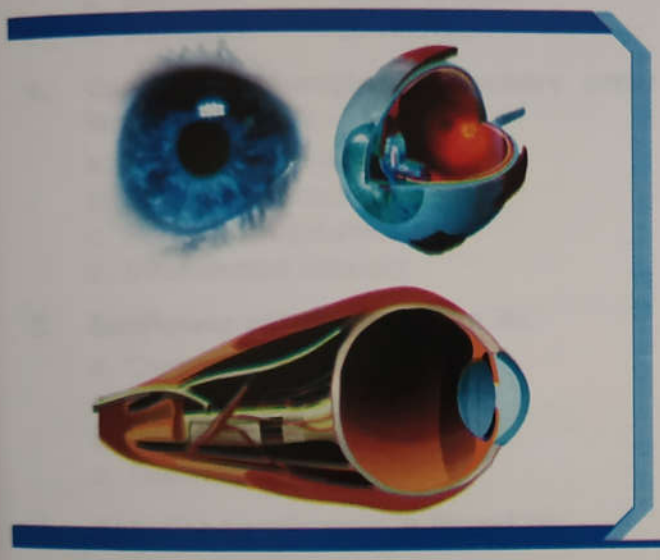

OPHTHALMOLOGY

Diseases of the Lens – Questions

1. **Riders are commonly seen in:**
   a. Blue–dot cataract
   b. Zonular cataract
   c. Embryonal nuclear cataract
   d. Diffuse nuclear cataract

2. **Anterior polar cataract develops after:**
   a. Diabetes mellitus
   b. Penetrating injury of cornea
   c. Irradiation
   d. Chalcosis

3. **Typical diabetes cataract has characteristic morphology of:**
   a. Sunflower
   b. Oil droplet
   c. Snowflake
   d. Atellate

4. **Constantly changing refractory error is seen in**
   a. Raumatic cataract
   b. Diabetic cataract
   c. Morgagnian cataract
   d. Intumescent cataract

5. **Sunflower cataract is seen in:**
   a. Concussion injury
   b. Penetrating injury
   c. Hypertension
   d. Diabetes

6. **Anterior Lenticonus is found in:**
   a. Lowes syndrome
   b. Turners syndrome
   c. Downs syndrome
   d. Alports syndrome

7. **Steroid induced cataract is**
   a. Anterior subcapsular
   b. Posterior subcapsular
   c. Nuclear
   d. Cupulliform cataract

8. **Polychromatic luster is seen in:**
   a. Zonular Cataract
   b. Posterior Subcapsular Cataract
   c. Nuclear Cataract.
   d. Anterior subcapsular cataract.

9. **Ectopia Lentis is seen in all the following conditions except:**
   a. Congenital Rubella
   b. Marchesani's Syndrome.
   c. Marfan Syndrome
   d. Homocystinuria

10. **Supero-temporal type of Ectopia lentis is the characteristic sign of:**
    a. Homocystinuria
    b. Ehler-Danlos syndrome
    c. Weill-Marchesani syndrome
    d. Marfan's syndrome

11. **Most common type of Congenital Cataract is:**
    a. Capsular
    b. Zonular
    c. Coralliform
    d. Blue Dot

12. **Lens capsule is thinnest at the:**
    a. Centre Anteriorly
    b. At Equator
    c. Centre posteriorly
    d. Superiorly

13. **Hamarlopia occurs in:**
    a. Central Cataract
    b. Peripheral Cataract
    c. Hypermature Cataract
    d. Mature Cataract

14. **Ideal site for intra-ocular lens implantation is:**
    a. Anterior to pupil
    b. Ciliary sulcus
    c. On Anterior capsule
    d. On posterior capsule

15. **Intra ocular lenses are made up of**
    a. PMMA
    b. HEMA
    c. Glass
    d. Plastic

1. b	2. b	3. c	4. d	5. b	6. d	7. b	8. b	9. a	10. d
11. d	12. c	13. a	14. d	15. a					

16. Clinical features of complicated cataract are all except:
a. Polychromatic luster
b. Axial spread of opacity
c. Opacity along sutures
d. Both a and c

17. Lens derives its nutrition from:
a. Aqueous
b. Vitreous
c. From the sclera
d. None

18. Most common senile cataract causing glaucoma is:
a. Incipient type
b. Nuclear type
c. Morgagnian hypermature
d. Sclerotic Hypermature

19. Most common type of cataract following radiation is:
a. Posterior subcapsular
b. Anterior subcapsular
c. Tear drop cataract
d. Diffuse cataract

20. Lens develops from:
a. Mesoderm b. Neuro-Ectoderm
c. Endoderm d. Surface Ectoderm

21. A diabetic patient gets cataract because accumulation of sorbitol in lens. The enzyme responsible for this is:
a. Glucokinase
b. NADPH Dependent aldose reductase
c. Phospho fructo isomerase
d. Hexokinase

22. Frequent change of presbyopic glasses is an early symptom of:
a. Senile Cataract
b. After Cataract
c. Open-Angle Glaucoma
d. Closed-Angle Glaucoma

23. Cataract is seen in all except:
a. Diabetes mellitus
b. Dystrophia myotonica
c. Atopic eczema
d. Toxemia of pregnancy

24. Cataract is found in all except:
a. Primary pulmonary hypertension
b. Hypoparathyroidism
c. IDDM
d. Myotonic dystrophy

25. Amongst the following accepted current treatment of congenital cataract:
a. Lensectomy
b. Needling
c. Lens aspiration with anterior vitrectomy
d. ECCE

26. Expulsive haemorrhage in cataract surgery is due to rupture of:
a. Vortex vein
b. Short posterior ciliary artery
c. Long posterior ciliary artery
d. Anterior ciliary artery

27. Causes of ASC are all except:
a. Long acting miotics
b. Amiodarone
c. Atopic dermatitis
d. Corticosteroids

28. Weiger's ligament is:
a. Between posterior hyaloid face and the retina
b. Between anterior hyaloid face and the lens
c. Between the anterior hyaloid face and the ora serrata
d. Between the posterior hyaloid face and the vitreous body

29. Cupuliform cataract is:
a. Nuclear
b. Cortical
c. Posterior subcapsular
d. Radial spokes

30. the oldest fibres are located in:
a. embryonic nucleus
b. Fetal nucleus
c. Infantile nucleus
d. Adult nucleus

16. b	17. d	18. a	19. a	20. d	21. b	22. c	23. d	24. a	25. c
26. b	27. d	28. b	29. c	30. a					

31. Sunflower cataract is characteristically seen in:

a. Chalcosis
b. Diabetes
c. Stargardts' disease
d. Congenital syphilis

32. The most common complication of hypermature sclerotic cataract is:

a. Dislocation of the lens
b. Phacomorphic Glaucoma
c. Uveitis
d. Neovascularisation of retina.

33. Intraocular lens are made of:

a. PMMA b. Silicone
c. Hydrogel d. Acrylic
e. All.

34. A 55-year old patient presents with colored halo and on Finchams' test, there is break-up of halo and rejoining of halos. Diagnosis is:

a. Open-Angle Glaucoma
b. Cataract
c. Mucopurulent Conjunctivitis
d. Acute Angle closure glaucoma.

35. "Second sight of old age" is generally due to:

a. Coronary Cataract
b. Nuclear Cataract
c. Anterior capsular cataract
d. Posterior polar cataract

36. Frequent change of presbyopic glasses is an early symptom of:

a. Senile Cataract
b. After Cataract
c. Open-Angle Glaucoma
d. Closed-Angle Glaucoma

37. Vossius ring is seen in:

a. Anterior capsule of lens
b. Posterior capsule of lens
c. Nucleus
d. Cortex

38. Most common complication following cataract surgery:

a. endophthalmitis
b. Expulsive choroidal hemorrhage
c. After-cataract
d. Complicated cataract

39. Mittendorf's dot is associated with which type of cataract?

a. Cortical cataract
b. Christmas tree cataract
c. Rosette cataract
d. Posterior polar cataract

40. Oil droplet cataract is seen in:

a. Keratoconus
b. Lenticonus
c. Galactosemia
d. Down's syndrome

41. 1mm difference in axial length measurement on biometry would result in change in IOL power by:

a. 1D b. 3D
c. 4D d. 6D

42. Father of IOLs:

a. von Hemholtz
b. Harold Ridley
c. Binkhorst
d. Charles Kelman

43. Soemmerring's ring is seen:

a. due to blunt trauma
b. after cataract surgery
c. due to penetrating injury
d. in congenital cataract

44. Treatment of choice of expulsive haemorrhage is:

a. Immediate wound closure with vitrectomy
b. Immediate wound closure with AC paracentesis
c. Immediate wound closure followed by sclerotomy
d. Immediate wound closure

45. A person sustained blunt trauma to the eye with immediate dimunition of vision. The anterior chamber is deep. Cause could be:

a. Hyphema
b. Dislocation of lens
c. Retinal detachment
d. Iridodialysis

31. a	32. a	33. e	34. b	35. b	36. c	37. a	38. c	39. d	40. c
41. b	42. b	43. b	44. c	45. b					

46. Glass Blower's cataract is generally:
a. Anterior subcapsular
b. Posterior subcapsular
c. Anterior capsular
d. Posterior capsular

47. Posterior subcapsular cataract is best diagnosed by;
a. Direct ophthalmoscope
b. Indirect ophthalmoscope
c. Slit lamp microscopy
d Distant direct ophthalmoscopy

48. Oil-globule reflex during ophthalmoscopy is seen in:
a. Galactosemia
b. Anterior lenticonus
c. Keratoconus
d. Microsherophakia

49. All are true regarding lens except:
a. Radius of curvature of anterior surface is 10mm
b. Basement membrane of the anterior lens epithelium is the thickest basement membrane of the body
c. Radius of curvature of posterior surface is 6mm
d. Lens capsule is thickest at the posterior pole

50. Cataract can be caused by prolonged ingestion of which drug:
a. Phenothiazines
b. Methotrexate
c. Ethambutol
d. Chloroquine

51. What is done of congenital cataract involving visual axis:
a. Wait and watch
b. Operated when baby reaches appropriate age
c. Give mydriatics
d. Immediately operate

52. lens contains which antigen
a. Sequestered antigen
b. Cross antigens
c. Heterophile antigens
d. Isoantigens

53. Which type of lenticonus is more common in males:
a. Posterior
b. Anterior
c. Both are equally common
d. Inferior

54. Rosette shaped cataract involves which part of the lens:
a. Anterior sub capsular
b. Anterior cortex
c. Posterior subcapsular
d. Posterior cortex

55. length of incision in phacoemulsification is:
a. 2.75 - 3.2 b. 3.0-3.5
c. 3.2-3.5 d. 2.5-2.75

56. The method of calculating the IOL power:
a. Keratometry
b. Pachymetry
c. SRK formula
d. Biometry

57. Fleischer's ring is located in :
a. Descemet's membrane
b. Endothelium
c. Epithelium
d. Bowman's membrane

58. Congenital cataract occurs due to abnormalities in protein formation in which of the following genes?
a. PAX6 b. SIX5
c. CryG d. PITX3

59. Most prominent ocular feature of Marfans syndrome is
a. Ectopia lentis
b. Megalocornea
c. Lattice degeneration
d. Long axial length

60. Cupuliform cataract starts from:
a. Centre anteriorly
b. Centre posteriorly
c. Peripheral anteriorly
d. Peripheral posteriorly

46. b	47. c	48. b	49. d	50. a,d	51. d	52. a	53. b	54. d	55. a
56. d	57. b	58. c	59. a	60. b					

Diseases of the Lens – Explanations

1. B. Zonular cataract

Riders are radial spokes of opacities seen in zonular or lamellar type of congenital cataract

2. B. Penetrating injury of cornea

Penetrating injuring of cornea may be associated with rupture of the anterior capsule of the lens to create a opacity directly at the anterior polar region.

Even if the capsule is not violated, penetrating injury of the cornea results in the escape of aqueous humor and the resultant decrease in aqueous circulation results in accumulation of toxic metabolites at the anterior polar region.

3. C. Snowflake

Snowflake cataract is also described as snowstorm cataract. Seen typically in uncontrolled type 1 diabetes mellitus. It is composed of multiple subcapsular opacities – posterior mostly

4. D. Intumescent cataract

Constantly changing refractive error is seen in intumescent cataract and in diabetic cataract during the intumescent cataract. So, intumescent cataract is a better option than diabetic cataract.

5. B. Penetrating injury

Sunflower cataract is seen in chalcosis due to accumulation of copper on the anterior capsule. Chalcosis is ocular copper toxicity due to retained intraocular copper foreign body. So, the answer is indirectly, penetrating injury.

6. D. Alports syndrome

Anterior lenticonus is seen in Alport's syndrome

Posterior lenticonus is seen in Lowe's syndrome

7. B. Posterior subcapsular

Cataract is caused by systemic steroids and even steroid skin ointments in which case, there is a typical bilateral posterior subcapsular cataract. Topical steroids(eyedrops/ointments) cause secondary open angle glaucoma more than cataract

8. B. Posterior Subcapsular Cataract

Posterior subcapsular cataract have a typical shiny appearance – colorful granules just beneath the capsule, when see non the slitlamp

9. A. Congenital Rubella

The other three are classical causes of ectopia lentis

Weill-Marchesani syndrome – anterior and inferior dislocation

Marfan's syndrome – Superotemporal dislocation

Homocystinuria – Inferonasal dislocation

10. D. Marfan's syndrome

Marfan's patients characteristically present with bilateral dislocation which is superotemporal in direction.

11. D. Blue Dot

Most common type of congenital cataract is blue-dot or punctate cataract

Most common type of congenital cataract that is visually significant is Zonular or lamellar cataract

12. C. Centre posteriorly

Lens capsule is thinnest at the posterior pole

It measures just 4 microns

13. A. Central Cataract

Hamarlopia means day blindness

Any lens opacity that is centrally located would result in decreased vision during daytime. pupillary constriction occurs in bright light and the central cataractous areas block out the light resulting in this phenomenon.

14. D. On posterior capsule

The ideal sit is "in the capsular bag" on the posterior capsule

15. A. PMMA

IOLs made of PMMA (Poly Methyl Meth acrylate) are called RIGID IOLs. They may be used in ECCE and SICS. Foldable IOLs are used in phacoemulsification.

16. B. Axial spread of opacity

These posterior subcapsular opacities spread peripherally and not axially

17. A. Both a and c

Lens derives its nutrition mainly from aqueous humor. The glucose from aqueous humor enters into the lens by passive diffusion and facilitated transport.

18. A. Incipient type

Most common complication of hypermature Morgagnian cataract – phacolytic glaucoma

Most common complication of sclerotic hypermature cataract – lens dislocation

19. A. Posterior subcapsular

Ionizing radiation like beta, gamma rays, X-rays cause posterior subcapsular cataract

20. D. Surface Ectoderm

Surface ectoderm (overlying the optic vesicle) gives rise to lens through formation of lens placode– lens pit- lens vesicle

21. B. NADPH Dependent aldose reductase

Sorbitol pathway involves the enzyme aldose reductase which is NADPH-dependent. This converts the excess glucose in the lens into sorbitol and results in snowflake cataract.

22. C. Open-Angle Glaucoma

This is a typical feature of primary open angle glaucoma

23. D. Toxemia of pregnancy

Diabetes mellitus – Snowflake cataract

Myotonic dystrophy – Christmas tree cataract

Atopic eczema – Shield cataract

24. A. Primary pulmonary hypertension

Hypoparathyroidsm – Lamellar cataract

IDDM – Snowflake cataract

Myotonic dystrophy – Christmas tree cataract

25. C. Lensectomy with anterior vitrectomy

Lensectomy done throught pars plana route along with primary posterior capsulotomy and anterior vitrectomy (to reduce the chances of after-cataract)

26. B. Short posterior ciliary artery

Expulsive choroidal hemorrhage is a dreaded intra-operative complication of cataract surgery. It occurs due to the rupture of short posterior ciliary arteries. Risk factor for expulsive choroidal hemorrhage is uncontrolled hypertension.

27. D. Corticosteroids

Corticosteroids cause posterior subcapsular cataract

28. B. Between anterior hyaloid face and the lens

It is also known as Hyaloideo-capsular ligament of Weiger or Retrolental ligament. It is a circular attachment of the vitreous to the posterior capsule of the lens.

29. C. Posterior subcapsular

It is a centrally located posterior subcapsular cataract

30. A. Embryonic nucleus

The first formed lens fibres are located in the embryonic nucleus which forms the core of the lens.

31. A. Chalcosis

Sunflower cataract is seen in Wilson's disease and chalcosis

32. A. Dislocation of the lens

Most common complication of sclerotic hypermature cataract – lens dislocation

Most common complication of hypermature Morgagnian cataract – phacolytic glaucoma

Phacomorphic glaucoma is a complication of intumescent cataract

33. E. All

Rigid IOL – PMMA

Foldable IOLs - Silicone, Acrylic and Hydrogel

34. B. Cataract

Interpretation of Fincham's test:

Break in the halos and rejoining – Cataract

Continuous halos – Glaucoma (angle closure)

35. B. Nuclear Cataract

"Second sight of old age" is seen in nuclear sclerosis due to the phenomenon of index myopia.

Here, a presbyopic patient who is wearing near glasses for reading no longer needs his glasses for near work due to the index myopia that occurs in nuclear sclerosis.

36. C. Open-Angle Glaucoma

Frequent change of presbyopic glasses is a typical feature of primary open angle glaucoma

Frequent change of glasses may also be seen in intumescent cataract, diabetic mellitus.

37. A. Anterior capsule of lens

Vossius ring is the imprint of miotic pupil on the anterior capsule of lens due to blunt trauma

39. C. After-cataract

After-cataract or Posterior Capsular Opcification(PCO) is the most common complication after cataract surgery

Expulsive choroidal hemorrhage si an intra-operative complication

Complicated cataract is a type of cataract

39. D. Posterior polar cataract

Posterior polar cataract is a congenital cataract which is associated with Mittendorf's dot. This is due to persistent remnant of the anterior end of the primary vitreous

40. C. Galactosemia

Galactosemia – Oil droplet cataract

Keratoconus -Oil droplet reflex on distant direct ophthalmoscopy

Lenticonus – Oil globule reflex on DDO/ slit lamp examination

41. B. 3D

1mm difference in axial length measurement on biometry would result in change in IOL power by 3D

1mm difference in radius of corneal curvature would result in a change in IOL power by 6D

42. B. Harold Ridley

Harold Ridley was the first to widely use PMMA IOLS in 1949

Charles Kelman invented the phacoemulsification macine

43. B. After cataract surgery

Soemmerring's ring is a type of posterior capsular opacification which is a complication after cataract surgery

After blunt trauma, Vossius ring may be seen

44. C. Immediate wound closure followed by sclerotomy

Expulsive choridal hemorrhage is a dreaded complication during cataract surgery. It is best managed by immediate woud closure and anterior sclerotomy later to let out the collected blood.

45. B. Dislocation of lens

Blunt trauma can result in dislocation of lens due to zonular stretching. In the absence of lens, the anterior chamber would be deep and there wuld be a high refractive error resulting in the diminution of vision.

46. B. Posterior subcapsular

Glass blowers' cataract is also known as heat cataract and it is posterior subcapsular in location

47. C. Slit lamp microscopy

Slitlamp is the best choice because one can localise it exactly beneath the posterior capsule, see it's typical granular appearance

Distant Direct Ophthalmoscopy(DDO) is done at a distance of 20to25cm. It is used to "look for media opacities". If opacities are present, they would appear

black against the red glow of the fundus. So PSC is detected using DDO and best diagnosed using slitlamp.

48. B. Anterior lenticonus

Lenticonus gives rise to oil globule reflex on distant direct ophthalmoscopy and also on slitlamp examination (retro-illumination)

49. D. Lens capsule is thickest at the posterior pole

Lens capsule is thinnest at the posterior pole

50. A. Phenothiazines, D. Chloroquine

Both a and b cause cataract. However, the chances of lens opacities are higher with phenothiazines.

Phenothiazines – anterior subcapsular opacities

Chloroquine – flaky posterior subcapsular opacities

51. D. Immediately operate

Immediately operate – as early as possible before four months of age to prevent the risk of sensory deprivation amblyopia

52. A. Sequestered antigen

Sequestered antigens are tissue antigens that are sequestered or hideen behind anatomic barriers. Hence they have not had contact with T cells when the repertoire of "self' antigens are determined. T cells are not rendered tolerant or anergic to these sequestered antigens. One such sequestered antigen is the "lens proteins"

53. B. Anterior

Alport's syndrome is X-linked and has anterior lenticonus. Hence, due to this inheritance pattern, anterior lenticonus is more common in males.

54. D. Inferior

Blunt trauma results in a rosette cataract wherein the opacities are located in the posterior region. This cataract has flower-shaped appearance, the petals of which correspond to sectors of posterior opacities.

55. A

56. D. Biometry

While planning for cataract surgery, correct power of IOL needs to be determined. The process of measuring the various anatomical characteristics of the eye that are needed for IOL power calculation is called ocular biometry.

57. C. Epithelium

Fleischer's ring is formed by deposition of iron in the epithelium at the base of the protruding cornea in keratoconus

58. C. CryG

Cry G gene codes for gamma crystallins ehich is one of the three different types of water-insoluble proteins present in the lens. Abnormality of these crystallin structure results in their aggregation and lens opacification – congenital cataract

59. B. Megalocornea

Most prominent is Megalocornea. Although all are ocular features of Marfan's syndrome, the most common is ectopia lentis. It is one of the major diagnostic criteria for diagnosis of Mrfan's itself. The long axial length and presence of lattice degeneration of the retina predisposes Marfan's patients to rhegmatogenous type of retinal detachment. Megalocornea is a very rare finding in Marfan's.

60. B. Centre posteriorly

Cupuliform cataract is a centrally located posterior cortical cataract. It starts from the centre and spreads peripherally towards the equator.

Glaucoma – Questions

61. Secondary glaucoma associated with angle recession is seen in:
a. Radiation injury
b. Concussion injury
c. Perforating injury
d. Chemical injury

62. Hypersecretory glaucoma is seen in
a. Epidemic dropsy
b. Marfans syndrome
c. Ehler Danlos Syndrome
d. Pseudoxanthoma elasticum

63. Which of the following is not a diagnostic criteria of Vogt's triad in chronic angle closure glaucoma:
a. Goniosynechiae
b. Iris atrophy
c. Glaucomflecken
d. Pigment dispersion

64. Raised episcleral venous pressure cases glaucoma in:
a. Pseudoexfoliation glaucoma
b. Phacomorphic glaucoma
c. Neovascular glaucoma
d. Sturge-Weber syndrome

65. Normal degree of anterior chamber angle is:
a. 15°-25° b. 25°-35°
c. 35°-45° d. 45°-55°

66. Earliest visual field defect in primary open-angle glaucoma is:
a. Siedel's scotoma
b. Bjerrum scotoma
c. Roenne's nasal steps
d. Scotoma in Bjerrum area

67. Side-effect of Latanoprost is:
a. Visual blur
b. Adenochrome deposition
c. Iris hyperpigmentation
d. Iris hypopigmentation

68. Treatment of choice in acute congestive glaucoma:
a. Pilocarpine
b. Peripheral iridectomy
c. Laser iridotomy
d. Trabeculoplasty

69. Coloured halos are seen in all except:
a. Mucopurulent conjunctivitis
b. Acute anterior uveitis
c. Tetracycline
d. Glaucoma

70. Which examination is of least value in open-angle glaucoma:
a. Tonometry
b. Perimetry
c. Indirect ophthalmoscopy
d. Direct ophthalmoscopy

71. In hypertensive patient having acute uveitis to decrease the IOP, which drug is used:
a. Pilocarpine b. Latanoprost
c. Iodine d. Timolol

72. Epinephrine is used in all except:
a. Aphakic glaucoma
b. Open angle glaucoma
c. Secondary glaucoma
d. Neovascular glaucoma

73. All the following anatomical changes will predispose to primary angle closure glaucoma; except:
a. Small cornea
b. Flat cornea
c. Anterior chamber shallow
d. Short axial length of eye ball

74 Normally in right eye, the peripheral field of vision is usually least in:
a. On the left side (nasally)
b. In the downward direction
c. In the upward direction
d. On the right side (temp.)

61. b	62. a	63. a	64. d	65. c	66. d	67. c	68. c	69. b	70. c
71. d	72. a	73. b	74. c						

75. Brimonidine is a
a. β1-receptor blocker
b. β2 agonist
c. α1 agonist
d. α2 agonist

76. A patient of glaucoma develops blepharoconjunctivitis after instilling some antiglaucoma drugs. Which of the following drug can be responsible for it:
a. Timolol b. Latanoprost
c. Dipivefrine d. Pilocarpine

77. You have been referred a middle-aged patient to rule out open angle glaucoma. Which of the following findings will help in the diagnosis:
a. Cupping of the disc
b. Depth of anterior chamber
c. Visual acuity and refractive error
d. Angle of the anterior chamber

78. In a hypertensive patient with glaucoma, which of the following is not used:
a. Dipivefrine
b. Beta blockers
c. Alpha agonist
d. Laser trabeculoplasty

79. All are contact type of applanation tonometer except:
a. Tonopen b. Perkins
c. Pulsair d. Goldmann

80. Antimetabolite used in filteration surgery is
a. Cyclophosphamide
b. Cyclosporin
c. Mitomycin C
d. Tacrolimus

81. A male patient with a history of hypemature cataract presents with a 2 day history of ciliary congestion, photophobia, blurring of vision and on examination has a deep anterior chamber in the right eye. The left eye is normal. The diagnosis is:
a. Phacomorphic glaucoma
b. Phacotoxic glaucoma
c. Phacoanaphylactic glaucoma
d. Phacolytic glaucoma

82. All are side-effects of pilocarpine except:
a. Shallow anterior chamber
b. Follicullosis
c. Posterior synechiae
d. Punctal stenosis

83. A 26 years old male has miotic pupil, intraocular pressure is 25mmHg, normal anterior chamber, hazy cornea with shallow anterior chamber of fellow eye. The likely diagnosis is:
a. Acute anterior uveitis
b. Acute angle-closure glaucoma
c. Open-angle glaucoma
d. Orbital cellulitis

84. Blind spot of eye is due to:
a. Optic disc
b. 2mm away from disc
c. yellow spot
d. corneo-scleral function

85. Normally the cup disc ratio is:
a. Below 0.7 b. Below 1
c. Below 1.5 d. Below 0.1

86. Increased intraocular tension is seen in all except:
a. Epidemic dropsy
b. central retinal vein occlusion
c. Malignant melanoma
d. Phthisis bullbi

87. Neovascular glaucoma is not seen in:
a. Eale's disease
b. Central retinal vein occlusion
c. Branch vein occlusion
d. Diabetes mellitus

88. Treatment of choice for congenital glaucoma is:
a. Trephining
b. Goniotomy
c. Scheie's operation
d. Cyclodialysis

75. d	76. a	77. a	78. a	79. c	80. c	81. d	82. b	83. b	84. a
85. a	86. d	87. c	88. b						

89. The conditions which may be associated with bupthalmos are recognised side effects of various antiglaucoma therapies except:-
a. Pilocarpine causes myopia
b. Adrenaline causes cystoid macular oedema
c. Betaxolol causes bronchoconstriction
d. Acetazolamide causes renal stone

90 About acute congestive glaucoma, wrong statement is:
a. Relieved during sleep
b. Increased by reading in dark
c. Relieved by iridotomy
d. Field defects are prominent

91 All conditions may be associated with buphthalmos:
a. Marfan's syndrome
b. Lowe's syndrome
c. Retinoblastoma
d. all of the above

92 All are true regarding malignant glaucoma except:
a. Is a post-operative complication
b. Does not occur if there is a functioning trabeculectomy
c. Can be successfully treated medically
d. Can be relieved by vitrectomy

93 Causes of secondary open-angle glaucoma include all except:
a. Pseudoexfoliation syndrome
b. Persistent hyperplastic primary vitreous
c. Phaco-anaphylactic glaucoma
d. Posner-Schlossman syndrome

94 Pain in absolute glaucoma is best relieved by:
a. Retro bulbar injection of alcohol
b. Analgesics
c. Cyclocryotherapy
d. Trabeculectomy

95 Campimetry is used to measure
a. Squint
b. Angle of anterior chamber
c. Pattern of retina
d. Field charting

96. All of the following conditions can produce NVG except:
a. Periphlebitis retinae
b. CRVO
c. DM
d. Keratoconus

97. The drug of choice in acute angle-closure glaucoma is:
a. Timolol maleate
b. Phospholine iodide
c. Mannitol
d. Pilocarpine

98. A 5 year old child presents with large cornea, lacrimation and photophobia. The probable diagnosis is:
a. Megalocornea
b. Congenital glaucoma
c. Congenital cataract
d. Anterior uveitis

99. Mild-dilated pupil, not reacting to light is seen in
a. Acute congestive glaucoma
b. Chronic congestive glaucoma
c. Open angle glaucoma
d. Congenital glaucoma

100. Tonography helps to determine:
a. Rate of formation of aqueous
b. Facility of outflow of aqueous
c. The levels of intra-ocular pressure at different times
d. None of the above

101. Hemolytic glaucoma occurs due to:
a. RBCs
b. Hemosiderin
c. Macrophages with phagocytosed RBCs
d. Ghost cells

102. A patient of glaucoma with bronchial asthma presents to the emergency with status asthmaticus. Causative agent might have been:
a. Pilocarpine b. Betaxolol
c. Levobunolol d. Epinephrine

89. c	90. d	91. d	92. b	93. b	94. c	95. d	96. d	97. c	98. b
99. a	100. b	101. c	102. c						

103. Ring scotoma is seen in:
a. Glaucoma
b. Retinitis pigmentosa
c. Sympathetic ophthalmia
d. Vitreous haemorrhage

104. Major site of obstruction in OAG is:
a. Corneal trabecular meshwork
b. Uveo-scleral trabecular meshwork
c. Juxtacanalicular trabecular meshwork
d. Scleral spur

105. Pilocarpine is not used in young myopes as it causes:
a. Folliculosis b. Iris cyst
c. Myopia d. uveitis

106. In a patient of bronchial asthma with open angle glaucoma, drug of choice is:
a. Pilocarpine
b. Timolol
c. Ipratropium bromide
d. Betaxolol

107. Anterior chamber is deep in:
a. Microcornea
b. Megalocornea
c. Congenital glaucoma
d. Anterior synechiae

108: Commonest symptom of infantile glaucoma is:
a. Photophobia
b. Pain
c. Watering of the eyes
d. Nystagmus

109. Inverse glaucoma is seen in:
a. Complicated cataract
b. Spherophakia
c. Pigmentary glaucoma
d. Glaucoma capsulare

110. Essential feature of glaucoma is:
a. Optic neuropathy
b. Raised intraocular pressure
c. Reduced vision
d. Painful

111. Optic disc changes of open angle glaucoma are all except:
a. Cupping of disc
b. Vertically oval cup
c. Snow banking
d. Bayonetting sign

112. Antiglaucoma drug that causes drowsiness
a. Pilocarpine
b. Brimonidine
c. Betaxolol
d. Prostaglandin analogues

113. Choice of treatment of neovascular glaucoma is:
a. Panretinal photocoagulation
b. Glaucoma Drainage Device
c. Trabeculectomy
d. Prostaglandin analogues

114. Antiglaucoma drug that increases the trabecular outflow
a. Betaxolol b. Pilocarpine
c. Brimonidine d. Latanoprost

115. Most common secondary glaucoma:
a. Pigmentary glaucoma
b. Pseudoexfoliation syndrome
c. Neovascular glaucoma
b. Malignant glaucoma

116 Antiglaucoma drug contraindicated in infants :
a. Brimonidine b. Latanoprost
c. Bimatoprost d. Timolol

117 Which of the following can be used for self tonometry?
a. Dynamic contour tonomete
b. Draeger tonometer
c. Rebound tonometer
d. Perkin's tonometer

118 Laser trabeculoplasty is done for-
a. Chronic angle closure glaucoma
b. Neovascular glaucoma
c. Pseudoexfoliative glaucom
d. Uveitic glaucoma

119. which of the following topical agents cause heterochromia iridis
a. latanoprost b. Prednisolone
c. Timolol d. olopatadine

120. ExPress Implant is made up of
a. Silicone
b. Polypropylene
c. Stainless steel
d. Acrylic

103. b	104. c	105. c	106. d	107. c	108. c	109. b	110. a	111. c	112. b
113. a	114. b	115. b	116. a	117. c	118. c	119. a	120. c		

Glaucoma – Explanations

61. B. Concussion injury

Blunt trauma causes angle recession and may result in a secondary open angle glaucoma called angle recession glaucoma

62. A. Epidemic dropsy

Epidemic dropsy causes hypersecretory glaucoma. It is due to the contamination of mustard oil by Argemone Mexicana. There is increased secretion of aqueous humor resulting in raised IOP and an open angle glaucoma.

63. A. Goniosynechiae

Vogt's triad consists of findings that areevidences of previous angle closure attack. It includes iris atrophy, pigment deposition on he endothelium and glaucomflecken(anterior subcapsular opacities on the lens)

64. D. Sturge-Weber syndrome

IN Sturge-Weber syndrome, there is raised episcleral venous pressure resulting in a secondary open angle glaucoma. It occurs in 30-70% of patients and is unilateral; on the same side as the port-wine stain.

65. C. 35°-45°

The iridocorneal angle measures 35-45 degrees when it is widely open.

66. D. Scotoma in Bjerrum area

Paracentral scotoma is the earliest visually significant visual field defect of glaucoma. It occurs in the Bjerrum's area because of damage to the arcuate nerve fibres.

67. C. Iris hyperpigmentation

Prostaglandin analogues cause increased pigmentation of the iris and also periocular areas. Latanaprost is the most commonly used PG analogue

68. C. Laser iridotomy

Laser peripheral iridotomy is the treatment of choice.

It is done as treatment of the involved eye and as prophylaxis in the fellow eye. It is done using Nd:YAG laser.

69. B. Acute anterior uveitis

Colored halos are seen in incipient cataract, angle closure glaucoma, mucopurulent conjunctivitis, eye ointments (like tetracycline)

70. C. Indirect ophthalmoscopy

Perimetry is essential to detect and document visual field defects of glaucoma

Tonometry is to measure intraocular pressure which needs to be reduced in glaucoma.

To diagnose glaucoma, characteristic optic disc changes of glaucoma need to be visualized. Direct ophthalmoscopy is a better instrument than indirect for this purpose, because of the 15 times magnification that it offers.

71. D. Timolol

Timolol is a safe drug in inflammatory glaucomas. Pilocarpine and prostaglandin analogues are contraindicated in inflammatory glaucomas as they would aggravate inflammation.

72. A. Aphakic glaucoma

Epinephrine promotes and aggravates inflammation and would result in cystoid macular edema if used in aphakes. Hence, it is contraindicated in aphakic glaucoma.

73. B. Flat cornea

Flat cornea does not result in narrowing of angle nor shallowing of AC. On the contrary, the AC is deep and may be associated with open angle glaucoma.

74. C. In the upward direction

Superior field is the least (50 degrees)

Temporal field is the maximum (90 degrees)

75. D. α2 agonist

Brimonidine is a selective alpha 2 agonist and decreases IOP by decreasing aqueous production.

76. A. Timolol

Almost all the glaucoma drugs cause blepharoconjunctivitis. Timolol is more commonly used and is a better option. If, however, brimoninidine is among the options, that would be the best option.

77. A. Cupping of the disc

Open angle glaucoma is diagnosed and also ruled out by doing a fundus examination to look for characteristic optic disc changes.

78. A. Dipivefrine

Dipivefrine is a non-selective alpha agonist. This means it would stimulate alpha 1 receptors causing vasoconstriction and increase in blood pressure. Therefore, it is contradicated in hypertensives.

79. C. Pulsair

Pulsair is a non-contact type of applanation tonometer which does not touch the cornea.

80. C. Mitomycin C

Mitomycin C is the most common antimetabolite used in trabeculectomy.

The other antimetabolite is 5-fluorouracil

81. D. Phacolytic glaucoma

This is a case of hypermature Morgagnian cataract being complicated by phacolytic glaucoma. This is a secondary open angle glaucoma (deep AC) and is associated with inflammation (ciliary congestion and photophobia)

82. B. Follicullosis

Numerous, prominent follicles may be incidentally found in the inferior fornix bilaterally, a condition called benign lymphoid folliculosis. This is not associated with inflammation.

Pilocarpine may cause in follicular conjunctivitis; not folliculosis.

83. B. Acute angle-closure glaucoma

Why should the fellow eye have hazy cornea n shallow AC? N this eye, constricted pupil but nothing else!!! It should be primary angle closure glaucoma with acute attack on treatment. That is the reason why the eye in question has IOP a little above nomal(25mm Hg) and miotic being used. This also explains the pupillary finding. This also explains the possibility of angle closure in the other eye..AC shallowing n hazy cornea.

84. A. Optic disc

Optic disc represents the physiological blind spot owing to the lack of photoreceptors in that area.

85. A. Below 0.7

Normal Cup disc ratio can be upto 0.6.

Myopic eyes usually have big discs with large CDR.

86. D. Phthisis bullbi

Phthisis bulbi denotes end-stage eye disease characterized by shrinkage and disorganization of the eye with the resultant functional loss. It si a soft eye due to low IOP owing to ciliary body atrophy.

87. C. Branch vein occlusion

The underlying cause for NVG is retinal ischemia. Branch RVO affects only one quadrant of the retina which does not result in as much retinal hypoxia. The amount of VEGF released is usually not significant to cause NVG.

88. B. Goniotomy

Goniotomy is the treatment of choice for congenital glaucoma if the cornea is clear.

In case, the cornea is hazy, the procedure of choice would be trabeculotomy

89. C. Betaxolol causes bronchoconstriction

Betaxolol is a selective beta 1- blocker. Therefore it spares the bronchodilatory beta 2 receptors and may be safely used in patients of bronchial asthma. Non-selective beta blockers like timolol, levobunolo cause bronchoconstriction.

90. D. Field defects are prominent

Visual field defects of glaucoma are a result of loss of nerve fibres. This is not usually seen in acute congestive glaucoma.

91. D. All of the above

Marfan's syndrome and Lowe's syndrome are associated with trabeculodysgenesis and developmental glaucomas resulting in buphthalmos.

In retinoblastoma, there can be secondary glaucoma due to infiltration of the tumor cells in the ciliary body and anterior movement of the lens-iris diaphragma causing secondary angle closure or infiltration of the trabecular meshwork by tumor cells resulting in secondary open angle glaucoma. In a young child, this could result in enlargement of the eyeball - buphthalmos

92. B. Does not occur if there is a functioning trabeculectomy

Malignant glaucoma is characterized by elevated IOP with a shallow or flat AC in an eye with a patent peripheral iridotomy. It usually occurs following trabeculectomy in patients with acute or chronic angle closure glaucoma.

It is due to aqueous misdirection into the vitreous with anterior displacement of the lens-iris diaphragm.

This is relieved by atropine (drug of choice) or by vitrectomy

93. B. Persistent hyperplastic primary vitreous

PHPV results in a secondary angle closure glaucoma. In severe cases, the lens may be pushed forward by the retrolental mass. This flattens the anterior chamber causing secondary angle closure. The glaucoma can occur acutely because of rapid lens opacification and swelling of the lens, or it may develop gradually over years.

94. C. Cyclocryotherapy

Destruction of ciliary body by cryol laser

95. D. Field charting

Campimetry is used to assess the visual field.

Bjerrum's tangent screen is used in campimetry.

96. D. Keratoconus

Eale's disease, CRVO and proliferative diabetic retinopathy are all causes of posterior segment ischemia which is the underlying cause for neovascular glaucoma.

97. C. Mannitol

Mannitol is 1st drug to be given. In acute angle closure attack, the peripheral iris bunches up at the periphery closing the angle. Pilocarpine is the drug of choice for its miotic action.

98. B. Congenital glaucoma

Congenital glaucoma is charaterised by a triad of symptoms: Watering (lacrimation), photophobia and blepharospasm. Megalocornea may be present if the rise IOP occurred before 2 yrs.

99. A. Acute congestive glaucoma

Acute angle closure attack or acute congestive glaucoma ischaracterised by typical pupillary findings:

1. Mid-dilated pupil
2. Vertically oval pupil
3. Non-reactive to light

100. B. Facility of outflow of aqueous

Tonography measures the facility of aqueous outflow through the trabecular meshwork

Tonometry measures the intraocular pressure(IOP)

101. C. Macrophages with phagocytosed RBCs

In hemolytic glaucoma, hemoglobin-laden macrophages block the trabecular meshwork casing secondary open angle glaucoma. This is seen after vitreous hemorrhage.

102. C. Levobunolol

Levobunolol is a non-selective beta blocker. Blocking of the bronchodilatory beta 2 receptors would have caused bronchoconstriction and precipitated the asthmatic attack.

103. B. Retinitis pigmentosa

As to your doubt, "why not glaucoma"? There are other field defects which are typical for glaucoma. However, ring scotoma is typical for RP.

104. C. Juxtacanalicular trabecular meshwork

The main site of resistance to aqueous outflow is the juxtacanalicular trabecular meshwork. This resistance increases in open angle glaucoma decreasing the facility of aqueous outflow.

105. C. Myopia

Pilocarpine causes more myopia due to spasm of accommodation. This is painful to the patients and causes blurring of vision.

106. D. Betaxolol

betaxolol is a selective beta 1- blocker. Therefore it spares the bronchodilatory beta 2 receptors and may be safely used in patients of bronchial asthma.

Timolol, being a non-selective beta blocker is contraindicated in asthmatic patients.

107. C. Congenital glaucoma

Congenital glaucoma is usually characterized by buphthalmos and the angle is usually wide. AC is deep when the angle is wide or vice versa.

108. C. Watering of the eyes

The most common symptom of congenital and infantile glaucoma is watering

109. B. Spherophakia

In acute attack of angle closure glaucoma(acute congestive glaucoma), and most of the secondary angle closure glaucomas, it is because of the peripheral iris closing the angle and a relative pupillary block. Miotic is the drug of choice in these conditions for its miotic action. Now, if we give atropine, which is a cycloplegic and MYDRIATIC, the iris would bunch up at the periphery, reinforcing the existing angle closure. Therefore, atropine is contraindicated in the usual angle closure type of glaucomas.

However, in spherophakia, if there is anterior dislocation of lens, it would absolutely block the pupil and result in secondary angle closure glaucoma due to rise in posterior chamber pressure and iris bombe. Giving pilocarpine would not relieve the pupillary block in this case. That is why it is called inverse glaucoma. Here, the mydriatic action of atropine is employed to relieve the pupillary block as temporary measure before surgery.

110. A. Optic neuropathy

The defining feature of glaucoma is it is a progressive optic neuropathy with characteristic optic disc changes and visual field defects.

111. C. Snow banking

Snowbanking is a pthognomonic feature of pars plnitis/intermediate uveitis

Normal shape of the cup is horizontally oval while in glaucoma, it is vertically oval

112. B. Brimonidine

Selective alpha-2 agonists crosses the bloodbrain barrier and causes CNS suppression. This results in drowsiness.

113. A. Panretinal photocoagulation

The basis for the treatment of NVG is to reduce the retinal ischemia. Panretinal photocoagulation remains the mainstay in controlling the neovascular drive and should be considered in all cases of NVG when retinal ischemia is the underlying cause. It works even when the angles are occluded by new vessels.

114. B. Pilocarpine

Drugs that increase aqueous outflow

Trabecular outflow – Pilocarpine

Uveoscleral outflow – Prostaglanding F2a analogues

115. B. Pseudoexfoliation syndrome

Pseudoexfoliative glaucoma is the MCC secondary open angle glaucoma.

This is characterized by deposition of whitish-gray protein on the lens, iris, ciliary epithelium, corneal endothelium and trabecular meshwork. The deposit

accumulates in the trabecular spaces and focally collapses Schlemm's canal. This decreases aqueous humor outflow and increases IOP.

116. A. Brimonidine

Brimonidine crosses the bloodbrain barrier and causes CNS suppression. This poses the risk of sleep apnea in infants and is, therefore, contraindicated.

117. C. Rebound tonometer

Rebound tonometer(iCare)

It is a hand-held instrument which measures the deceleration of a magnetized probe in an electromagnetic field on the rebound from the cornea

118. C. Pseudoexfoliative glaucoma

Pseudoexfoliative glaucoma is the MCC secondary open angle glaucoma. Laser trabeculoplasty may be indicated in open angle glaucomas to increase the outflow facilty through the trabecular meshwork by widening the openings. It may e done using argon laser or Nd:YAG laser

119. A. latanoprost

Prostaglandin analogues cause increased pigmentation of the iris – hyperchromia iris and therefore, heterochromia iridis

120. C. Stainless steel

Express shunt is an aqueous shunt (also known as Express minishunt is made of stainless steel.

Ahmed Glaucoma Valve may be made of polypropylene or silicone

Molteno implant may be made of acrylic

Cornea – Questions

121. Interstitial keratitis is seen in all of the following except:
a. TB
b. Leprosy
c. Syphilis
d. Toxoplasmosis

122. Satellite lesions of cornea are caused by:
a. Bacteria
b. Fungi
c. Viruses
d. Mixed infection

123. Corneal thickness is decreased in
a. Acute angle closure glaucoma
b. Band-shaped keratopathy
c. Keratoconus
d. Fuch's dystrophy

124. Minimal thickness of cornea which should remain after LASIK
a. 270 um
b. 380 um
c. 480 um
d. 180 um

125. Earliest symptom of corneal ulcer is:
a. Loss of sensation
b. Diminished vision
c. Photophobia
d. Pain

126. Dendritic keratitis is caused by:
a. Herpes virus (HSV1)
b. Pseudomonas
c. Streptococci
d. Staphylococci

127. Neuroparalytic keratitis is caused by paralysis of
a. Optic nerve
b. Trigeminal nerve
c. Oculao motor nerve
d. Facial nerve

128. The most metabolically active layer of the cornea is
a. Epithelium
b. Stroma
c. Descemet's membrane
d. Endothelium

129. Which of the following is a corneal epithelial dystrophy
a. Map-Dot-Fingerprint
b. Macular
c. Granular
d. Lattice

130. The organism which can penetrate normal corneal epithelium is
a. Streptococcus
b. Gonococcus
c. Pseudomonas
d. Pneumococcus

131. Radial keratotomy is done for
a. Hypermetropia
b. Myopia
c. Astigmatism
d. Keratoconus

132. In case of central dense leucoma involving entire cornea treatment of choice is:
a. Lamellar keratoplasty
b. Penetrating keratoplasty
c. Tattooing
d. Enucleation

133. Bullous keratopathy involves pathology lies in:
a. Descemet's membrane
b. Epithelium
c. Endothelium
d. Bowman's membrane

134. EDTA is used in treatment of:
a. Band-shaped keratopathy
b. Lipid keratopathy
c. Bullous keratopathy
d. Exposure keratitis

135. Dense scar of cornea with incarceration of iris is known as:
a. Leucoma adherens
b. Dense leucoma
c. Ciliary staphyloma
d. Iris bombe

121. d	122. b	123. c	124. a	125. c	126. a	127. d	128. d	129. a	130. b
131. b	132. b	133. c	134. a	135. a					

136. Panophthalmitis occurs following:
a. Blunt injury
b. Perforated corneal ulcer
c. Orbital cellulitis
d. Preseptal cellulitis

137. Steroids are contraindicated in
a. Phlyctenular conjunctivitis
b. Granular conjunctivitis
c. Mooren's ulcer
d. Dendritic ulcer

138. Cogan's syndrome is:
a. Neural deafness with retinitis pigmentosa
b. Interstitial keratitis with deafness
c. Interstitial keratitis with glaucoma
d. Neural deafness with glaucoma

139. Corneal sensation is diminished in
a. Herpes simplex keratitis
b. Fungal keratitis
c. Trachoma
d. Bacterial keratitis

140. Therapeutic keratoplasty is done in:
a. High myopia
b. Anterior staphyloma
c. Keratoconus
d. Progressive corneal ulcer

141. Type of immunological reaction seen in endothelial graft rejection is
a. Type II b. Type III
c. Type IV d. Type I

142. Herpetic keratitis is treated by
a. Analgesics b. Atropine
c. Steroids d. Acyclovir

143. Corneal epithelium is composed of:
a. Stratified keratinized epithelium
b. Stratified Non-keratinized squamous epithelium
c. Columnar epithelium
d. Pseudostratified epithelium

144. Most common ocular complications of diphtheria is
a. Paralysis of accommodation
b. External ophthalmoplegia
c. Sluggish pupillary reflex
d. Optic neuritis

145. Fleischer's ring is characteristic of
a. Megalocornea
b. Diabetes
c. Chalcosis
d. Keratoconus

146. Treatment of early keratoconus is:
a. Soft contact lenses
b. Rigid gas permeable lenses
c. Toric lenses
d. Keratoplasty

147. All are features of fungal keratitis except
a. Less symptoms and more signs
b. Infected hypopyon
c. Early pannus
d. Dry slough

148. Corneal nerves are clearly seen in slit-lamp in all except:
a. Keratoconus
b. Leprosy
c. Neurofibromatosis
d. Tuberculosis

149. Refractive index of cornea is
a. 1.33 b. 1.37
c. 1.41 d. 1.43

150. Rupture of Descemet's membrane is seen in:
a. Keratoconus
b. Corneal dystrophy
c. Rubella
d. Interstitial keratitis

151. Recurrent corneal erosion is a feature of
a. Keratoglobus
b. Keratoconus
c. Glaucoma
d. Corneal dystrophy

152. Hutchinson's sign is seen in:
a. acanthamoeba keratits
b. herpes-simplex keratitis
c. Zoster uveitis
d. Dendritic ulcer

136. b	137. d	138. b	139. a	140. d	141. c	142. d	143. b	144. a	145. d
146. c	147. c	148. d	149. b	150. a	151. d	152. c			

153. Which of the following is not an iron pigmentation of cornea
a. Turk's line
b. Stocker's line
c. Ferry's line
d. Hudson–Stahli line

154. Arcus senilis is due to deposition of
a. Lipid b. Hyaline
c. Calcium d. None

155. Sclera is thinnest at
a. Equator
b. Ora serrata
c. Posterior to recti insertion
d. Anterior to recti insertion

156. Scleromalacia perforans is a complication of
a. Rheumatic arthritis
b. Sarcoidosis
c. Tuberculosis
d. Herpes zoster

157. Ulcus serpens result from infection by
a. Gonococcus
b. Pseudomonas pyocyanea
c. Pneumococcus
d. Proteus vulgaris

158. Photophobia is absent in
a. Xeroderma pigmentosa
b. Iridocyclitis
c. Neurotrophic keratitis
d. Photophthalmia

159. Examination of surface of cornea is done by
a. Pachymetry
b. Specular microscopy
c. Gonioscopy
d. Corneal topography

160. Salmon – patch is seen in
a. Angular conjunctivitis
b. Interstitial keratitis
c. Phlyctenular keratitis
d. Herpes simplex keratitis

161. Specular microscopy is done for
a. Measuring depth of anterior chamber
b. Measuring angle of anterior chamber
c. Examination of corneal endothelium
d. Measuring corneal curvature

162. Munson's sign is positive in
a. Episcleritis
b. Retinal detachment
c. Keratoconus
d. Cataract

163. Average central thickness of cornea is:
a. 350μm b. 450μm
c. 550μm d. 650μm

164. Commonest fungus causing mycotic hypopyon ulcer is
a. Candida albicans
b. Aspergillus fumigatus
c. Mucor
d. Blastomyces

165. Pannus in trachoma consists of:
a. Superficial vascularisation
b. Deep vascularisation
c. Lymphocytic infiltration with vascularisation
d. Hyaline infilteration and elastotic degeneration

166. A soft contact lens wearer developed pain and itching of the eye and shows a reticular pattern on the corneal epithelium. The cause could be:
a. Corneal dystrophy
b. Acanthamoeb
c. Pseudomonas
d. Recurrent

167. Commonest organism causing hypopyon ulcer in adults is:
a. Staphylococcus b. Pneumococcus
c. Pseudomonas d. Moraxella

168. In keratoconus, myopia is:
a. Index b. Axial
c. Curvatural d. All of the above

169. Which of the following type of stromal dystrophies reoccurs in graft:
a. Granular b. Lattice
c. Fuch's d. Macular

153. a	154. a	155. c	156. a	157. c	158. c	159. d	160. b	161. c	162. c
163. c	164. b	165. c	166. b	167. b	168. c	169. b			

170. Hypopyon in bacterial corneal ulceration consists of:

a. Lymphocytes
b. Polymorphs
c. Lymphocytes with bacteria
d. Polymorphs with bacteria

171. Percentage of acyclovir eye ointment

a. 1%
b. 2%
c. 3%
d 4%

172. The prevalence of trachoma follicles to start the SAFE strategy should be more than

a. 5%
b. 10%
c. 15%
d. 20%

173. All are causes of interstitial keratitis except:

a. Syphilis
b. Acanthamoeba
c. Herpes
d. Chlamydia

174. Most common infection after soft contact lens use is:

a. Pseudomonas
b. Pneumococcus
c. Acanthamoeba
d. Aspergillosis

175. Corneal dystrophy which is autosomal recessive is:

a. Macular
b. Granular
c. Lattice
d. Microcystic

176. In herpes zoster ophthalmicus , least involved nerve is

a. Facial nerve
b. Intraorbital
c. Lacrimal
d. Nasociliary

177. Treatment of Mooren's ulcer is

a. Corneal graft
b. Immunosuppressive
c. Topical steroids
d. All of the above

178. Viral disciform keratitis is which type of hypersensitivity reaction:

a. Type 1
b. Type 2
c. Type 3
d. Type 4

179. Under hypoxic conditions, which of the following substances is strongly implicated as a cause of corneal edema?

a. Lactate
b. Glycogen
c. Carbon dioxide
d Pyruvate

180. A recurrent bilateral conjunctivitis occurring with the onset of hot weather in young boys with symptoms of burning, itching, and lacrimation with large flat topped raised areas in the palpebral conjunctiva is:

a. Trachoma
b. Phlyctenular conjunctivitis
c. Mucopurulent conjunctivitis
d. Vernal keratoconjunctivitis

170. b	171. c	172. b	173. d	174. a	175. a	176. d	177. d	178. d	179. a
180. d									

121. D. Toxoplasmosis

This is an inflammation affecting chiefly the stroma of the cornea. It is of infective or more often allergic origin. Causes include measles, typhoid, syphilis, tuberculosis, leprosy, idiopathic.

122. B. Fungi

Fungal keratitis is characterized by the presence of satellite lesions.

123. C. Keratoconus

Keratoconus is characterized by central corneal thinning.

In the other three options, cornea is thickened – due to corneal stromal edema in Acute angle closure glaucoma and Fuch's endothelial dystrophy and due to calcium deposits in the Bowman's layer in band-shaped keratopathy.

124. A. 270 um

Aiming to maintain a residual stromal bed thickness of 270 µm is a safe measure to prevent iatrogenic post-LASIK corneal ectasia.

125. C. Photophobia

Ulcer is defined as breach in epithelium. Here, it is breach of corneal epithelium thereby, exposing the corneal nerve plexuses. This results in excessive stimulation of pain fibres of the nerves(by light) thus, photophobia is the first symptom.

126. A. Herpes virus

Dendritic ulcer is the characteristic type of keratitis cased by Herpes virus.

The most common cause of dendritic ulcer is Herpes simplex virus type 1

127. D. Facial nerve

Neuroparalytic keratitis and exposure keratitis due to involvement of facial nerve

Neurotrophic keratitis due to involvement of trigeminal nerve

128. D. Endothelium

Endothelium is metabolically the most active layer of the cornea due to the presence of ATP-consuming sodium-potassium pumps and endothelial pumps. After, endothelium, it is the epithelium.

129. A. Map-Dot-Fingerprint

Cogan's dystrophy is the most common epithelial dystrophy characterized by lesions in the form of maps, dots or fingerprints.

Macular, granular and lattice dystrophies are stromal dystrophies.

130. B. Gonococcus

Organisms that can penetrate intact intact corneal epithelium include Gonococcus, Meningococcus.

131. B. Myopia

Radial keratotomy is an outdated procedure that was previously done for the management of myopia.

132. B. Penetrating keratoplasty

A full thickness leucoma would totally block the visual axis and leave the patient blind. It is a cause of corneal blindness. A leucoma would best benefit by a full-thickness corneal transplantation i.e. penetrating keratoplasty

133. C. Endothelium

Bullous keratopathy is characterized by the presence of bullae in the epithelium. It is a painful condition. The pain being caused by the rupture of these bullae. The underlying cause for bullous keratopathy, however, is dysfunctional endothelium.

134. A. Band-shaped keratopathy

EDTA is a chemical that dissolves/ chelates calcium. This is used as a topical agent in the management of band-sahaped keratopathy where calcium is deposited in the bowman's layer.

135.

136.

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141.

135. A. Leucoma adherens

Adherent leucoma is characterized by a opaque corneal scar(leucoma) to the back of which the iris is stuck. This occurs following healing of a perforated corneal ulcer/injury.

Cliliary staphyloma is a bulge of the sclera lined by ciliary body

Iris bombe is forward bowing of iris.

136. B. Perforated corneal ulcer

Corneal ulcer caused by Pseudomonas aeruginosa is particularly prone for perforation and subsequently endophthalmitis progressing to panophthalmitis.

Panophthalmitis can occur following perforating injury(not blunt injury) with the wound being contaminated by Clostridium.

Panophthalmitis may cause orbital cellulitis

137. D. Dendritic ulcer

Steroids are contraindicated in dendritic ulcer because it would impair healing of the epithelial defect.

138 B. Interstitial keratitis with deafness

Combination of interstitial keratitis with sensorineural hearing loss and vestibular dysfunction is called Cogan's syndrome

SNHL with RP is seen in Usher's syndrome and Cockayne's syndrome

139. A. Herpes simplex keratitis

The hallmark of viral keratitis is decreased or absent corneal sensation

140. D. Progressive corneal ulcer

When keratoplasty is indicated for treatment, as in non-responding(progressive) corneal ulcer, it is called THERAPEUTIC keratoplasty. It is done to eliminate the infectious burden (usually fungal/acanthamoeba).

141. C. Type IV

Endothelial type of graft rejection seen after keratoplasty is a delayed type hypersensitivity.

142. D. Acyclovir

Dendritic ulcer is the most common type of viral keratitis and the drug of choice is Acyclovir 3% eye ointment

The drug choice for viral stromal keratitis is topical steroids.

So here, Acyclovir is a better option because dendritic ulcer is a more common form of herpetic keratitis

143. B. Stratified Non-keratinized squamous epithelium

The stratified nature of corneal epithelium ensures mechanical stability of the cornea. The non-keratinizing nature of the squamous epithelium ensures the transparency of the cornea

144. A. Paralysis of accommodation

Diphtheria affects the ciliary ganglion and results in INTERNAL OPHTHALMOPLEGIA characterized by paralysis of ciliary muscles (accommodation paralysis) and sphincter muscle(dilated pupil)

145. D. Keratoconus

Fleischer's ring is composed of iron that gets deposited in the epithelium at the base of the conical cornea in keratoconus

In chalcosis, Kayser-Fleischer ring (KF ring) is seen which is composed of copper deposition in the Descemet's membrane.

146. C. Toric lenses

The question specifically asks for "early" keratoconus. Milder forms (when the astigmatism is more regular) of keratoconus can be corrected with toric soft contact lenses.

RGP lenses may be used as the keratoconus advances and the astigmatism becomes more irregular.

147. C. Early pannus

Fungal keratitits is charaterised by absence of corneal vascularization. Pannus is a combination of cellular infiltration and corneal vascularization. Therefore, pannus will not be seen in fungal corneal ulcer.

148. D. Tuberculosis

Corneal nerves are enlarged in leprosy and neurofibromatosis and are therefore clearly seen. In keratoconus,

there is merely an increased visibility of corneal nerves.

149. B. 1.37

Cornea – 1.376
Aqueous and vitreous – 1.33
Lens nucleus – 1.41

150. A. Keratoconus

Rupture of DM occurs in Keratoconus. These are vertical tears – Vogt's striae

151. D. Corneal dystrophy

This is feature of epithelial type of corneal dystrophy. Recurrent corneal erosion is a painful condition.

152. C. Zoster uveitis

Hutchison's sign is seen in HZOdue to the involvement of nasociliary nerve.
Lesion at tip of nose is usually associated with corneal involvement.

153. A. Turk's line

Stocker's line is seen in Pterygium
Ferry's line is seen around the filtering bleb
Hudson-Stahli's line is seen in old age

154. A Lipid

In arcus senilis, lipid is deposited in the Bowman's layer and anterior stroma

155. C. Posterior to recti insertion

The sclera is thinnest just behind the insertion of the recti muscles. It measures just 0.3mm in thickness

156. A. Rheumatic arthritis

Scleromalacia perforans is a necrotizing anterior scleritis not associated with inflammation.
The most common cause of scleromalacia perforans is rheumatoid arthritis

157. C. Pneumococcus

The ulcer caused by Streptococcus pneumoniae is called Ulcus serpens
It is also called Serpiginous ulcer or Creeping corneal ulcer

158. C. Neurotrophic keratitis

Neurotrophic keratitis (NK) is a degenerative corneal disease caused by damage of trigeminal corneal innervation. This results in spontaneous epithelial breakdown and corneal ulceration. The impairment of corneal sensory innervation causes the reduction of both protective reflexes and neurotrophic factors. In neurotrophic keratitits, the corneal nerves are insensitive and hence, no photophobia.

159. D. Corneal topography

Corneal topography **is a computer-assisted, non-**invasive diagnostic tool that creates a three-dimensional map of the surface curvature of the cornea. It is **also known as photokeratoscopy or videokeratography.**

160. B. Interstitial keratitis

Syphilitic keratitis is a non-ulcerative interstitial keratitis that typically manifests as a late sequela of congenital or acquired syphilis. The corneal neovascularization and lymphatic extension into the cornea leads to the classic salmon-colored patch

161. C. Examination of corneal endothelium

Specular microscopy is used for examination and counting of the corneal endothelium
Keratometry is to measure the corneal curvature

162. C. Keratoconus

The indentation of lower lid by the conical cornea upon downgaze is called Munson's sign. It is a sign of advanced keratoconus

163. C. 550µm

The average central corneal thickness is 500-600 microns
Corneal thickness is measured using pachymeter

164. B. Aspergillus fumigatus

Most common cause of fungal corneal ulcer is the filamentous fungus – Aspergillus fumigatus. Fungal hypopyon is always infected.

165. C. Lymphocytic infiltration with vascularisation

Pannus is characterized by cellular infiltration into the cornea and vascularization of the cornea. These inflammatory infiltrates are lymphocytes.

166. B. Acanthamoeb

Although soft contact lens users are prone for Pseudomonas infection, in this question the answer is Acanthamoeba inspite of no other risk factors. This is because of the reticular pattern of the lesion which describes the pseudodendrites that may be seen in Acanthamoeba keratitis.

167. B. Pneumococcus

Hypopyon means pus in AC

Most common cause of hypopyon ulcer is Pneumococcus

Bacterial hypopyon is sterile

168. C. Curvatural

The ectatic cornea results in increase in curvature of the cornea and results in curvatural myopia

169. B. Lattice

Recurrences is seen in the graft after keratoplasty in granular

Lattice and granular stromal dystrophies.

Lattice>granular >macular

170. B. Polymorphs

Bacterial hypopyon is sterile consisting only of neutrophils (polymorphonuclear cells)

Most common cause of hypopyon corneal ulcer is Pneumococcus

171. C. 3%

Acyclovir 3% eye ointment used 5 times a day is the treatment of choice for dendritic ulcer

172. B. 10%

SAFE strategy is implemented if prevalence is >10% of active inflammation, that is, Follicular stage of WHO's FISTO staging in children aged 1-9 years

173. B. Acanthamoeba

Interstitial keratitis is chronic, nonulcerative inflammation of the midstroma.

Interstitial keratitis could be caused by unusual infections such as syphilis, tuberculosis, mumps, Lyme disease, Chlamydia, leprosy, brucellosis, Epstein-Barr virus, Rubeola, parasitic infection, or herpes zoster and simplex

174. A. Pseudomonas

The soft contact lens users are prone for infection due to pseudomonas aeruginosa. The ability of Pseudomonas to form biofilm makes soft contact lens users at risk for this infection.

Contact lens users with specific risk factors like unhygienic cleaning practices, swimming with contact lenses are at risk for infection due to Acanthamoeba.

175. A. Macular

Macular dystrophy is the least common stromal dystrophy and is autosomal recessive in inheritance.

Granular and lattice stromal dystrophies are autosomal dominant in inheritance

Cogan's microcystic fingerprint-map-dot-dystrophy is epithelial type of dystrophy which is usually not inherited although a few autosomal dominant cases are reported

176. A. Facial nerve

Least common nerve to be involved in HZO is facial nerve

Most common nerve to be involved in HZO is frontal nerve

177. D. All of the above

Mooren's ulcer is characterized by a chronic, painful, peripheral ulcerative keratitis (PUK) with with a characteristic steep, undermined, or overhanging margin but no associated scleritis.

It occurs completely in absence of any diagnosable systemic disorder that could be responsible for the progressive destruction of the cornea. It is an autoimmune process, with both cell-mediated and humoral components.

Treatment includes topcal steroids, topical and systemic immunosuppressants, conjunctival flap, keratopasty.

178. D. Type 4

Disciform type of viral keratitis is a delayed-type hypersenstitivity(type 4 HS) to viral antigens.

179. A. Lactate

Under aerobic conditions, the corneal metabolism is mainly aerobic glycolysis. Beyond 6-7 hours of hypoxia, the metabolism shifts to anerobic glycolysis. hypoxic conditions, thus producing lactate.

180. D. Vernal keratoconjunctivitis

This is a classic presentation of spring catarrh or vernal keratoconjunctivitis. This occurs with the onset of summer in young boys. The histamine released produces itching. The flat-topped raised areas in the palpebral conjunctiva is a description of the papillae seen in this condition – cobblestone appearance.

181. Horner Tranta's spots are seen in:
a. Viral kerato conjunctivitis
b. Vernal kerato conjunctivitis
c. Trachoma
d. Herpes simplex

182. Shield corneal ulcer is seen in:
a. Phlyctenular kerato conjunctivitis
b. Vernal kerato conjunctivitis
c. Trachoma
d. Fungal Ulcer

183. Ropy discharge is the diagnostic finding of:
a. Vernal conjunctivitis
b. Swimming pool conjunctivitis
c. Epidemic kerato conjunctivitis
d. Phylectenular conjunctivitis

184. Which microorganism most commonly cause haemorrhagic conjunctivitis
a. Adenovirus
b. Coxsackie A-24
c. Papilloma virus
d. Entero virus 70

185. Herbert's pits are seen in
a. Trachoma
b. Spring catarrh
c. Phylectenular conjunctivitis
d. Sarcoidosis

186. Unilateral watery discharge from the eye of a newborn with no edema or chemosis is due to
a. Chlamydia
b. Gonococcus
c. Sticky eye
d. Chemical conjunctivitis

187. Drug of choice of trachoma is
a. Penicillin
b. Azithromycin
c. Tetracycline
d. Chloremphenicol

188. FISTO staging is used for:
a. Trachoma b. Spring catarrh
c. Pterygium d. Chemical injuries

189. The specific topical remedy suggested for angular conjunctivitis is:
a. Dexamethasone
b. Sulphacetamide
c. Zinc oxide
d. Penicillin

190. Most common cause of blindness in India
a. Trachoma
b. Vitamin A deficiency
c. Cataract
d. Myopía

191. Cobble-stone appearance is a feature of
a. Viral conjunctivitis
b. Spring catarrh
c. Fungal conjunctivitis
d. Bacterial conjunctivitis

192. All are features of trachoma except
a. Pannus b. Follicle
c. Cicatrisation d. Phlycten

193. Follicular conjunctivitis is caused by all except:
a. Spring catarrh
b. Adult Inclusion conjunctivitis
c. Trachoma
d. Cat – scratch fever

194. Arlt's line is seen in:
a. Horizontal scar in lower palpebral conjunctiva
b. Horizontal scar in upper palpebral conjunctiva
c. Vertical scar in lower palpebral conjunctiva
d. Vertical scar in upper palpebral conjunctiva

181. b	182. b	183. a	184. d	185. a	186. d	187. b	188. a	189. c	190. c
191. b	192. d	193. a	194. b						

195. Subconjunctival haemorrhage occurs in all the following conditions except:

a. Passive venous congestion
b. Pertussis
c. Trauma
d. High IOP

196. Acute hemorrhagic conjunctivitis is caused by all the following conditions except:

a. Adenovirus
b. CMV
c. Enterovirus-70
d. Coxsackie –A24

197. All of the following are true about trachoma except:

a. Seen in unhygienic condition
b. Seen in old age
c. The corneal lesion is pannus
d. Pits are seen in the limbus in late cases.

198. Ophthalmia neonatorum is caused by all except;

a. Staphylococcus
b. Gonococcus
c. Chlamydia
d. Enterovirus

199. A patient complains of pain in both eyes with congestion, blurring of vision, photophobia and watery discharge.The probable causative organism is :

a. Adenovirus
b. Enterovirus-70
c. Herpes simplex
d. Cox-sackie-24

200. Ophthalmia neonatorum usually present during:

a. 1-3 days b. 3-5 days
c. After 5 days d. 1-2wks

201. Circumcorneal congestion is not seen in:

a. Retinal detachment
b. Corneal ulcer
c. Acute uveitis
d. Acute congestive glaucoma

202. Group of bacilli in skeletonized pus cells is characteristics of conjunctivitis due to:

a. Tuberculosis
b. Haemophilus aegypticus
c. E.coli
d. C. diptheriae

203. Membranous conjunctivitis seen in all except:

a. C. diphtheriae
b. Erythema multiforme
c. Actinomyces
d. Staphylococcus

204 Phlycten is due to:

a. Endogenous allergy
b. Exogenous allergy
c. Degeneration
d. None of the above

205. Parenchymatous xerosis of conjunctiva is caused by:

a. Xerophthalmia
b. Vernal catarrh
c. Trachoma
d. Phlyctenular conjunctivitis

206. Symblepharon occurs in:

a. Gonococcal conjunctivitis
b. Diphtheritic conjunctivitis
c. adeno virus conjunctivitis
d. Atopic conjunctivitis

207. Tear film break–up time is for:

a. Lipid layer
b. Mucin layer
c. Aqueous layerd.
d. All of the above

208. Predominant cell type present in the secretions in vernal conjunctivitis is:

a. Basophils b. Neutrophils
c. Eosinophils d. Lymphocyte

209. Allergic conjunctivitis include all except:

a. Spring catarrh
b. Phylctenular conjunctivitis
c. Follicular conjunctivitis
d. Giant papillary conjunctivitis

195. d	196. b	197. b	198. d	199. a	200. c	201. a	202. b	203. c	204. a
205. c	206. b	207. b	208. c	209. c					

210. All of the following are common symptoms of conjunctivitis except:
a. Redness b. Discharge
c. Irritation d. Pain

211. Phlyctenular keratoconjunctivitis is which type of hypersensitivity reaction:
a. I b. II
c. III d. IV

212. Epidemic keratoconjunctivitis is caused by
a. HSV b. HIV
c. Adenovirus d. Chlamydia

213. Which of these is not a likely cause of painful red eye in a patient?
a. Iridocyclitis
b. Closed angle glaucoma
c. Conjunctivitis
d. phacolytic glaucoma

214. All are true about membranous conjunctivitis except:
a. Easy to peel
b. Caused by Corynebacterium
c. May lead to cicatrisation
d. May cause corneal ulceration

215. All are causes of night blindness except:
a. Oguchi disease
b. Vitamin A deficiency
c. High myopia
d. Devic disease

216 Which of the following is true about pterygium?
a. Associated with infrared radiation exposure
b. Probe can be passed underneath the pterygium at the limbus
c. There is elastotic degeneration with Descemet's membrane distortion
d. Bare sclera technique of treatment has 30-80% recurrence

217 Conjunctiva in Vitamin A deficiency shows
a. Hyperplasia of squamous epithelium
b. Actinic degeneration
c. Macrophage infiltration
d. Hyperplasia of goblet cell

218 Pinguecula is more common
a. Nasally b. Temporally
c. Superiorly d. Inferiorly

219 Fascicular ulcer is a feature of
a. vernal keratoconjunctivitis
b. Phlyctenular keratoconjunctivitis
c. Ophthalmia neonatorum
d. xerophthalmia

220. All are causes of conjunctival scarring except
a. Stevens-Johnson's syndrome
b. Cicatrical pemphigoid
c. Trachoma
d. Vernal keratoconjunctivitis

210. d	211. d	212. c	213. c	214. a	215. d	216. d	217. a	218. a	219. b
220. d									

Conjunctiva – Explanations

181. B. Vernal kerato conjunctivitis

Horner-Trantas dots are Gelatinous nodules seen around the limbus. They are collections of degenerated epithelial cells and eosinophils. These are pathognomonic of the limbal form of VKC.

182. B. Vernal kerato conjunctivitis

Shield corneal ulcer is a complication of vernal keratoconjunctivitis

Other corneal findings in VKC/spring catarrah are gerontoxon, secondary keratoconus

183. A. Vernal conjunctivitis

The mucoid discharge of VKC has a very characteristic ropy or stringy character and is almost diagnostic.

184. D. Entero virus 70

Enterovirus 70 is the most common cause of hemorrhagic conjunctivitis (Apollo conjunctivitis)

185. A. Trachoma

Herbert's pits are seen when the Herbert's follicles of trachoma heal and are epithelialized.

186. D. Chemical conjunctivitis

Silver nitrate that was used as chemoprophylaxis against gaonococcal conjunctivitis could potentially result in a sterile inflammation – chemical conjunctivitis.

Most common cause of ophthalmia neonatorum is Chlamydia trachomatis serotypes D to K

Gonococcal conjunctivitis is characterized by chemosis, purulent discharge and corneal ulceration. It is the most common cause of blindness-causing conjunctivitis in neonates.

187. B. Azithromycin

Azithromycin 1g single oral dose is the drug of choice for trachoma

188. A. Trachoma

WHO's FISTO staging is used fro trachoma

F- Follicle

I – Intense (inflammation)

S – Scarring

T – Trichiasis

O - Opacities

189. C. Zinc oxide

Zinc oxide is specifically used in angular conjunctivitis caused by Moraxella-Axenfeld diplobacillus (Moraxella lacunata)

190. C. Cataract

Most common cause of blindness in India and in the world – cataract

Most common cause of preventable/ avoidable blindness in India and in the world – cataract. This is because the blindness can be prevented b timely cataract surgery.

MOst common cause of preventable/ avoidable blindness in children - Vitamin A deficiency

Most common infectious cause of blindness in India and in the world - Trachoma

191. B. Spring catarrh

This is due to the presence of giant papillae in the palpebral conjunctiva in spring catarrh/ VKC

192. D. Phlycten

Phlycten or allergic nodule at limbus is a feature of phlyctenular keratoconjunctivitis

193. A. Spring catarrh

Adult inclusion conjunctivitis is a flollicular conjunctivitis caused by Chlamyida trachomatis serotypes D to K

Trachoma causes follicular conjunctivitis in the upper palpebral, especially pretarsal, conjunctiva

A common ocular manifestation of-cat-scratch disease is Parinaud's oculoglandular syndrome, characterized by unilateral **follicular conjunctivitis** and adjacent preauricular lymphadenopathy.

194. B. Horizontal scar in upper palpebral conjunctiva

Arlt's line is a whitish horizontal scar in lower palpebral conjunctiva seen in trachoma

195. D. High IOP

Raised venous pressure due to Valsalva maneuver or any other cause can result in subconjunctival hemprrhage

Trauma is the most common cause of SCH

Raised intraocular pressure has no association with SCH

196. B. CMV

Acute hemorrhagic conjunctivitis caused by Enterovirus 70 (MCC), Adnovirus 8 and 11, Coxsackie A-24, pneumococcus

197. B. Seen in old age

Follicle is the first stage of FISTO staging of trachoma. It is the infective stage of trachoma.

198. D. Enterovirus

Most common cause of ophthalmia neonatorum is Chlamydia trachomatis serotypes D to K

Most common caus of blindness in neonates – Gonococcal conjunctivitis

199. A. Adenovirus

This is a classic presentation of Acute Keratoconjunctivitis caused by Adeno-virus. The corneal involvement results in photophobia and blurring of vision. Watery discharge is characteristic of viral etiology.

200. C. After 5 days

Most common cause of ophthalmia neonatorum is Chlamydia trachomatis serotypes D to K. Incubation period fro Chlamydia is typically 5-14days

201. A. Retinal detachment

Redness as a symptom and circumcorneal congestion is seen in keratitis, corneal ulcer, iridocyclitis and acute angle closure attack. In retinal detachment, there is no redness of eyes.

202. B. Haemophilus aegypticus

This is a characteristic picture of Hemophlus aegypticus causing "pink eye"

203. C. Actinomyces

Membranous conjunctivitis is characterized by the formation of fibrinous exudates on the surface and into the substance of the epithelium of **conjunctiva.** Corynebacterium diphtheriae, beta-haemolytic streptococci, Streptococcus pneumoniae, Haemophilus aegyptius, Neisseria gonorrhoeae, Staphylococcus aureus, and Escherichia coli, SJS, erythema multiforme

204. A. Endogenous allergy

Phlyctenular keratoconjunctivitis is due to type IV hypersensitivity to endogenous allergens. The most common allergen is Staphylococcal protein. The second most common allergen is Tubercular protein.

205. C. Trachoma

Vitamin A deficiency causes xerosis epIthelialis

206. B. Diphtheritic conjunctivitis

Symblepharon is an adhesion between the bulbar and palpebral conjunctiva and occurs due to any condition which makes apposing surfaces raw and inflamed, allowing cicatrization and fibrosis. In membranous conjunctivitis, afer the slough separates, the conjunctiva becomes raw and there is danger of adhesions forming between the palpebral and bulbar parts of the conjunctiva (symblepharon). C.diphtheriae is a more common cause of membranous conjunctivitis than gonococcus.

207. B. Mucin layer

TBUT measures the adequacy of mucin content in the tearfilm. TBUT'. A tear film break-up time of less than 10 seconds is suggestive of a dry eye with deficiency of mucin.

208. C. Eosinophils

Vernal keratoconjunctivitis is mainly due to Ig-E- mediated hypersensitivity (type I) to exogenous allergens and also type IV HS.

209. C. Follicular conjunctivitis

Options A, b, d represent various types of allergic conjunctivitis.

210. D. Pain

Pain is usually not present in conjunctivitis unless it is associated with corneal involvement(keratoconjunctivitis).

211. D. IV

Phlyctenular keratoconjunctivitis is due to type IV hypersensitivity to endogenous allergens. The most common allergen is Staphylococcal protein. The second most common allergen is Tubercular protein.

212. C. Adenovirus

Adenovirus types 8, 19 are the usual causes of EKC

213. C. Conjunctivitis

Painful decrease in vision in red eye is seen in acute congestive glaucoma, iridocyclitis, phacolytic glaucoma

214. A. Easy to peel

The membrane is difficult to peel and results in bleeding, if peeled.

Membranous conjunctivitis can be complicated by sympblepharon and lagophthalmos resulting in corneal exposure.

215. D. Devic disease

Devic's disease is neuromyelitis optica where there is a decrease in visual acuity.

216. D. Bare sclera technique of treatment has 30-80% recurrence

It is associated with exposure to ultraviolet light

Probe can be passed beneath the pterygium just beneath its edges. It is tightly adherent to the limbus.

There is hyaline/elastotic degeneration with rupture of Bowman's layer.

217. A. Hyperplasia of squamous epithelium

Vitamin A deficiency results in squamous metaplasia, keratosis and decrease in goblet cell density

218. A. Nasally

Pinguecula and pterygium are more commonly located nasally on the bulbar conjunctiva

219. B. Phlyctenular keratoconjunctivitis

220. D. Vernal keratoconjunctivitis

The conjunctival scarring in SJS and OCP (ocular cicatricial pemphigoid) results in te formation of symblepharon in these conditions. The scar of trachoma is called Arlt's line.

Uveitis – Questions

221. Which cell type is most typically seen in KP of non-granulomatous uveitis:

a. PMN cells
b. Monocytes
c. Lymphocytes
d. Plasma cells

222. All of the following are true about sympathetic ophthalmitis except:

a. Earliest sign is retrolental flare
b. Most of the cases occur within two weeks of injury
c. Uveal antigen has been implicated as the responsible exciting agent
d. First symptom is loss of accommodation

223. Subacute anterior uveitis associated with raised intraocular pressure can be treated by all of the following except:

a. Acetazolamide
b. Timolol
c. Cylopentolate
d. Pilocarpine

224. Dalen-Fuch's Nodules are seen in:

a. Mycotic endophthalmitis
b. Phacotoxic endophthalmitis
c. Bacterial endophthalmitis
d. Sympathetic ophthalmitis

225. Type of synechiae in iris bombe is:

a. Total b. Goniform
c. Ring d. Filiform

226. In which uveitic condition is IOL implantation contraindicated:

a. Psoriatic arthritis
b. Juvenile rheumatoid arthritis
c. Fuch's heterochromic cyclitis
d. Reiter's syndrome

227. All of the following diseases are associated with HLA-B27 uveitis except:

a. Behcet's disease
b. Psoriasis
c. Ankylosing spondylitis
d. Reiter's syndrome

228. Commonest infection causing blindness in adults:

a. Toxocariasis
b. Toxoplasmosi gondii
c. Taenia solium
d. Plasmodium

229. First sign of sympathetic ophthamia is:

a. Retrolental flare
b. Aqueous flare
c. Dilated pupil
d. Constricted pupil

230 Uveitis with raised intraocular tension is best managed by:

a. Timolol b. Atropine
c. Pilocarpine d. Steroid

231. Circularis Iridis major is seen at:

a. Ciliary body
b. Root of iris
c. Collarette of iris
d. Pupillary margin of iris

232. Commonest opportunist organism to cause ocular inflammation in AIDS is:

a. Cytomegalovirus
b. Herpes simplex virus
c. Toxoplasmosis
d. Candida albicans

233. What is the most common complication in recurrent anterior uveitis:

a. Staphyloma
b. Glaucoma
c. Cataract
d. Vitreous haemorrhage

221. c	222. b	223. d	224. d	225. c	226. b	227. a	228. b	229. a	230. d
231. b	232. a	233. c							

234. Complications of iridocyclitis are all except:
a. Secondary glaucoma
b. Complicated cataract
c. Phthisis bulbi
d. Corneal ulcer

235. Earliest symptom of sympathetic ophthalmia is:
a. Photophobia
b. Pain
c. Loss of near vision
d. Loss of distant vision

236. In acute anterior uveitis, pupil is:
a. Oval
b. Circular
c. Small, irregular
d. Dilated

237. All are features of acute anterior uveitis except:
a. Aqueous flare
b. Shallow anterior chamber
c. Circumcorneal congestion
d. Miosis

238. Skin depigmentation, bilateral uveitis and tinnitus are features of:
a. Vogt- Koyanagi-Harada syndrome
b. Waardenburg syndrome
c. Apert syndrome
d Werner's syndrome

239. All of the following features are seen in pauciarticular JIA except:
a. Cataract b. Keratopathy
c. Scleritis d. Uveitis

240. All are complications of anterior uveitis except:
a. Glaucoma
b. Cataract
c. Macular edema
d. Retinal detachment

241. Iridocyclitis is a feature of:
a. Juvenile idiopathic arthritis with systemic involvement
b. Seropositive pauciarticular juvenile idiopathic arthritis
c. Seropositive polyarticular juvenile idiopathic arthritis
d. Seronegative pauciarticular juvenile idiopathic arthritis

242. Most common allergic manifestation of tuberculosis is:
a. Phlyctenular conjunctivitis
b. Koeppe's nodule
c. Uveitis
d. Scleritis

243. River blindness is caused by
a. Toxoplasmosis
b. Onchocerciasis
c. Toxocariasis
d. Histoplasmosis

244. Candle-Wax spots in the retina is seen in;
a. Sarcoidosis
b. Toxocara
c. Syphilis
d. Cytomegalo inclusive disease

245. Aqueous flare is best demonstrated by;
a. Torch light
b. Corneal loupe
c. Narrow beam of slit lamp
d. Direct ophthalmoscopy

246. Ocular signs of AIDS include all except:
a. Multiple cotton wool spots in the retina
b. Acute papillitis
c. Kaposi's sarcoma of conjunctiva
d. Pars planitis

247. Amsler sign is seen in:
a. Posner-Schlossmann syndrome
b. Fuch's uveitis syndrome
c. Lepromatous uveitis
d. Ocular toxocariasis

248. Causes of heterochromia include all except;
a. Siderosis
b. Congenital Horner's syndrome
c. Waardenberg's syndrome
d. Vogt-Koyanagi-syndrome

234. d	235. c	236. c	237. b	238. a	239. c	240. d	241. d	242. a	243. b
244. a	245. c	246. d	247. b	248. d					

249. Iritis is a feature of :
a. Psoriasis
b. Ocular pemphigoid
c. Ulcerative colitis
d. Onchocerciasis

250. Headlight-in-fog appearance of retina is seen in:
a. Toxoplasmosis
b. Toxocara
c. Herpes
d. Cytomegalovirus

251. A 25 yrs of old presnts with Severe, sudden onset of pain, corneal congestion, photophobia and deep anterior chamber in RE. The left eye is normal. X-ray pelvis shows sacro-iliitis. The diagnosis is:
a. Anterior uveitis
b. Posterior uveitis
c. Intermediate uveitis
d. Scleritis

252. All of the following causes Panuveitis except:
a. Ankylosing spondylitis
b. Toxoplasmosis
c. Sarcoidosis
d. Sympathetic ophthalmitis

253. All are features of acute Uveitis except:
a. Circumcorneal congestion
b. Deep anterior chamber
c. Miosis
d. Limited movements of globe

254. Snow-banking is typically seen in:
a. Pars planitis
b. Endophthalmitis
c. Coat's disease
d. Panophthalmitis

255. Dangerous area of the eye is:
a. Ciliary body b. Sclera
b. Optic nerve d. Retina

256. Pathognomonic diagnostic sign of anterior uveitis is:
a. Aqueous flare
b. Keratic precipitates
c. Constriction of pupil
d. Raised IOP

257. Iris pearls are seen in:
a. Herpes simplex keratitis
b. Syphilitic uveitis
c. Herpes Zoster uveitis
d. Lepromatous uveitis.

258. Iris atrophy is a pathognomonic finding in:
a. Lepromatous uveitis
b. Syphilitic uveitis
c. Varicella Zoster uveitis
d. Herpes simplex uveitis

259. Sign of activity in anterior uveitis is:
a. Aqueous flare
b. Aqueous cell in the anterior chamber
c. Constricted pupil
d. Raised IOP

260. Most common complication of pars planitis is:
a. Glaucoma
b. Cystoid macular edema
c. Cataract
d. Band shaped keratopathy

261. True statement about Fuch's heterochromic iridocyclitis:
a. Hyperpigmented iris
b. Hypopigmented iris
c. Posterior synechiae
d. Coarse KPs

262. Sympathetic ophthalmia is:
a. Unilateral non-suppurative inflammation
b. Bilateral non-suppurative inflammation
c. Bilateral suppurative inflammation
d. Unilateral suppurative inflammation

263. The neoantigen causing sympathetic ophthalmia is:
a. Lens protein
b. ciliary protein
c. Retinal S antigen
d. All of the above

249. a	250. a	251. a	252. a	253. d	254. a	255. a	256. b	257. d	258. c
259. b	260. b	261. b	262. b	263. c					

264. Posner–Schlossmann syndrome is:

a. Acute iridocyclitis
b. Glaucoma
c. Corneal ulcer
d. Conjunctivitis

265. Dalen –Fuch's nodules are seen in:

a. Anterior segment of eye in sympathetic ophthalmitis
b. Anterior segment of eye in sarcoidosis
c. Posterior segment of eye in sympathetic ophthalmitis
d. Anterior segment of eye in granulomatous uveitis

266. Anterior ciliary arteries are derived from:

a. Short PCA
b. Long PCA
c. Muscular artery
d. Conjunctival artery

267 Iris Roseola is seen with which of the following disease:

a. Leprosy b. Rubella
c. Syphilis d. TB

268. Transient and recurrent hypopyon is seen in

a. Behcet's disease
b. Still's disease
c. Rheumatoid arthritis
d. Sarcoidosis

269. All are causes of chronic granulomatous uveitis except:

a. Sarcoidosis
b. Tuberculosis
c. Brucellosis
d. Fuch's heterochromic iridocyclitis

270. Juxtapapillary choroiditis is a feature of

a. rubella b. TB
c. Sarcoidosis d. Behçet's

271. Drug of choice of iridocyclitis is:

a. Atropine b. Steroid
c. Pilocarpine d. Timolol

Q272. Eale's Disease is:

a. Recurrent anterior uveitis
b. Recurrent vitreous haemorrhage
c. Recurrent macular haemorrhage
d. Recurrent subconjunctival haemorrhage

273. Lisch nodules on iris is a feature of:

a. Amyloid oasis
b. Tuberous sclerosis
c. Neurofibromatosis
d. None of the above

274. Uveoparotitis is seen in:

a. Sarcoidosis b. SLE
c. Scleroderma d. Mumps

275. Most common eye finding in ulcerative colitis is:

a. Scleritis b. Episcleritis
c. Uveitis d. Conjunctivitis

276. Most common side effect after HAART therapy

a. Uveitis b. Keratitis
c. Glaucoma d scleritis

277. Which uveitis is associated with encephalitis

a. Sympathetic ophthalmitis
b. Vogt-Koyanagi-Harada syndrome
c. Sarcoidosis
d. Behçet's disease

278. All are type 4 hypersensitivity reactions except:

a. Eale's disease
b. Disciform keratitis
c. Sympathetic ophthalmitis
d. Stromal keratitis

279. Stellate KPs are seen in:

a. Posner- Schlossmann syndrome
b. Pars planitis
c. Fuch's uveitis
d. Macular degeneration

280. All are causes of salt and pepper fundus except

a. Rubella
b. Syphilis
c. Retinitis pigmentosa
d. Tuberculosis

264. a	265. c	266. c	267. c	268. a	269. d	270. b	271. b	272. b	273. c
274. a	275. b	276. a	277. b	278. a	279. c	280. d			

Uveitis – Explanations

221. C. Lymphocytes

Non-granulomatous uveitis characterized by the involvement of lymphocytes in the disease pathology. The lymphocytes get deposited on the endothelium to form fine keratic precipitates.

222. B. Most of the cases occur within two weeks of injury

Th timing of sympathetic ophthalmia is after two weeks of penetrating injury. It occurs between 2 weeks and 3 months of injury.

223. D. Pilocarpine

Pilocarpine is contraindicated in uveitis as it aggravates inflammation.

Timolol and acetazolamide may be used to control the rise in IOP accompanying uveitis.

Cyclopentolate is a cycloplegic that is absolutely necessary to relieve the pain anf and also to reduce the inflammation of anterior uveitis

224. D. Sympathetic ophthalmitis

Dalen-Fuch's nodules are seen in sympathetic ophthalmia

They may also be seen in Vogt-Koyanagi-Harada syndrome

225. C. Ring

Ring synechiae or seclusion pupillae is seen in iris bombe of iridocyclitis

226. B. Juvenile rheumatoid arthritis

In children with complicated cataract due to Juvenile rheumatoid arthritis(-JRA), currently named as Juvenile idiopathic arthritis(JIA), IOL implantation is contraindicated because of the increased chances of relentless inflammation post-operatively. However, nowadays, heparin-coated IOls may be used.

227. A. Behcet's disease

HLA-B27 uveitis is seen in Ankylosing spondylitis(most common cause) and also with Psoriatic arthritis, reactive arthritis, Reiter's syndrome.

Uveitis is also seen in Behcet's disease but is associated with HLA-B5 and B51

228. B. Toxoplasmosi gondii

Ocular toxoplasmosis is caused by the parasite *To*Toxoplasmi gondii. It causes a necrotizing chorioretinitis resulting in a chorioretinal scar at the macula – blindness

229. A. Retrolental flare

The first sign of sympathetic ophthalmia is retrolental flare in the uninjured eye(sympathizing eye).

230. D. Steroid

Uveitis with raised IOP is managed by topical steroids. IOP is raised mainly as a result of secondary open angle glaucoma due to inflammatory debris obstructing the trabecular meshwork. If the inflammation is controlled, the IOP would come down.

However, if the statement in the question is worded as, "Raised IOP in uveitis is best managed by _____", then the answer would timolol.

231. B. Root of iris

Major arterial circle of iris is seen at the root of the iris

Minor arterial circle of iris is seen at the pupillary border of the iris

232. A. Cytomegalovirus

CMV is the most common opportunistic organism to cause intraocular inflammation.; causes chorioretinitis.

CMV chorioretinitis is the most common cause of posterior uveitis in AIDS patients

233. C. Cataract

Most common complication of RECURRENT anterior uveitis is complicated cataract

Most common complication of anterior uveitis or ACUTE anterior uveitis is glaucoma

234. D. Corneal ulcer

Iridocyclitis may be a complication of perforating corneal ulcer but not vice versa.

235. C. Loss of near vision

Earliest symptom of sympathetic ophthalmia is loss of near vision in the uninjured eye(sympathizing eye) due to loss of accommodation

236. C. Small, irregular

The pupil is miotic and irregular in acute stage of anterior uveitis.

237. B. Shallow anterior chamber

Shallow AC is seen in later stages of uveitis when iris bombe and synechiae develop

Aqueous flare is the earliest sign of iridocyclitis

238. A. Vogt- Koyanagi-Harada syndrome

VKH syndrome is an autoimmune panuveitis. Autoimmunity is exhibited against melanocytes resulting in vitiligo. It affects three systems – CNS, skin/hair and eye.

239 C. Scleritis

JIA is the most common cause of band-shaped keratopathy, complicated cataract and anterior uveitis in children.

240. D. Retinal detachment

Complicated cataract and macular edema are complications of chronic/ recurrent anterior uveitis. Glaucoma may be a complication seen even in acute anterior uveitis.

241. D. Seronegative pauciarticular juvenile idiopathic arthritis

JIA is the most common cause of anterior uveitis/iridocyclitis in children. The pauci-articular ubtype of JIA is the most common subtype to be associated with this condition. And these children are rheumatoid factor negative (seronegative).

242. A. Phlyctenular conjunctivitis

Phlyctenular keratoconjunctivits is the most common allegic manifestation of TB. It is due to delayed-type hypersensitivity to TB antigens.

243. B. Onchocerciasis

244. A. Sarcoidosis

Candle wax drippings are very typical of the granulomatous uveitis caused by sarcoidosis.

245. C. Narrow beam of slit lamp

When narrow beam of light of slit lamp is passed through the AC, it elicits a Tundall effect due to the proteins in the aqueous, resulting in the finding called aqueous flare.

246. D. Pars planitis

Cotton wool spots are the most common finding of HIV retinopathy

The presence of syphilis in HIV patients is quite high. The most common finding of syphilitic uveitis was papillitis.

Kaposi's sarcoma of conjunctiva is the most common malignancy associated with HIV.

247. B. Fuch's uveitis syndrome

Hyphema following paracentesis is called Amsler's sign and is characteristic of Fuch's heterochromic iridocyclitis.

248. D. Vogt-Koyanagi-syndrome

Increased pigmentation of the iris is seen in siderosis

Lighter colored iris is seen in congenital Horner's syndrome and Waardenburg's syndrome

249. A. Psoriasis

Anterior uveitis may be seen in both psoriasis and inflammatory bowel disease(ulcerative colitis)

However, there is increased prevalence of uveitis in psoriatic arthritis compared to IBD

250. A. Toxoplasmosis

The posterior uveitis caused by ocular toxoplasmosis is characterized by "headlight in fog" appearance.

CMV chorioretinitis is characteise by

"pizza-pie" or "sauce and cheese" appearance.

251. A. Anterior uveitis

This is a typical clinical presentation of HLA-B27 associated anterior uveitis due to ankylosing spondylitis(sacroiliitis)

252. A. Ankylosing spondylitis

Ankylosis spondylitis is associated with a non-granulomatous type of anterior uveitis (HLA-B27 associated)

253. D. Limited movements of globe

Uveitis per se does not affect the extraocular muscles nor their innervation. So the movement of the eyeball is not affected in uveitis.

254. A. Pars planitis

The hallmark sign of pars planitis or intermediate uveitis is "Snow banking" at the pars plana region.

255. A. Ciliary body

Ciliary body is the danzerous zone of the eye because penetrating trauma to this area has the highest risk of sympathetic ophthalmia which could potentially result on bilateral blindness.

256. B. Keratic precipitates

In other words, the question asks for pathognomonic sign of anterior uveitis which is keratic precipitate on the cornea.

257. D. Lepromatous uveitis

Iris pearls are pearly iris nodules seen in anterior uveitis caused by leprosy

258. C. Varicella Zoster uveitis

Iris atrophy may be seen in voth zoster and leprosy. However, it is pathognomonic of Varicella zoster uveitis.

259. B. Aqueous cell in the anterior chamber

Earliest sign of active iridocyclitis is the presence of aqueous cells in anterior chamber

260. B. Cystoid macular edema

Cystoid macular edema is very common in the natural history of pars planitis and is the most common cause of decreased vision in these patients.

261. B. Hypopigmented iris

Fuch's heterochromic iridocyclitis is charactereised by hypopigmented iris(more commonly), fine stellate KPS and absence of posterior synechiae

262. B. Bilateral non-suppurative inflammation

Sympathetic ophthalmia is a bilateral non-suppurative granulomatous panuveitis that occurs following penetrating injury

263. C. Retinal S antigen

The release of retinal S antigen which is a sequestered antigen(neoantigen), following penetrating injury, results in the body's immune system mounting an immune response against it – sympathetic ophthalmia

264. A. Chronic iridocyclitis

Posner-Schlossman syndrome is a acute low-grade anterior uveitis resulting in a secondary open angle glaucoma.

265. C. Posterior segment of eye in sympathetic ophthalmitis

Dalen-Fuchs nodules, which are clusters of epithelioid cells containing pigment lying between the RPE and Bruchs membrane. Seen in sympathetic ophthalmia and VKH syndrome.

266. C. Muscular artery

There are totally seven anterior ciliary arteries. These are branches of muscular branches of the ophthalmic artery.

267. C. Syphilis

Iris roseolas are iris nodules seen in syphilitic iridocyclitis

Iris pearls are seen in leprotic uveitis

268. A. Behcet's disease

Uveitis of Behcet's disease is caracterised by bilateral, transient and recurrent hypopyon

269. D. Fuch's heterochromic iridocyclitis

Fuch's heterochromic iridocyclitis is a non-granulomatous type of uveitis

270. B. TB

Juxtapapillary choroiditis may be seen in Toxoplasma, TB.

271. B. Steroid

Drug of choice for uveitis is steroids.

The route of administration depends on the type of uveitis:

Anterior uveitis – Topical steroids

Intermediate uveitis/pars planitis – periocular steroids

Posterior uveitis – Systemic steroids

Although cycloplegics is part of the mainstay treatment of anterior uveitis, drug of choice is steroids.

272. B. Recurrent vitreous haemorrhage

Elae's disease is characterized by retinal periphlebitis and recurrent vitreous hemorrhage in apparently health young adult(male)

273. C. Neurofibromatosis

Lisch nodules are iris hamartomas seen in Neurofibromatosis

274. A. Sarcoidosis

Uveo-parotitis is seen in sarcoidosis and this entity is called Heerfordt syndrome

275. B. Episcleritis

Although uveitis may be seen in inflammatory bowel disease, the most common ocular feature is episcleritis.

276. A. Uveitis

Uveiits results due to the immune activation upon starting HAART

277. B. Vogt-Koyanagi-Harada syndrome

VKH is a uveo-meningo-encephalitic **syndrome** characterised by bilateral granulomatous panuveitis along with encephalitis features – meningismus, headache, fever.

278. A. Eale's disease

Eale's disease is characterised by a vasculitis(type III HS) – retinal phlebitis- due to hypersensitivity to TB proteins.

Nummular type of stromal keratitis is type 3 hypersensitivity

Disciform type of stromal keratitis is type 4 hypersensitivity

Hence, Eale's is a better answer than stromal keratitis.

279. C. Fuch's uveitis

Fuch's heterochromic iridocyclitis is characterised by fine stellate KPs

280. D. Tuberculosis

Salt and pepper chorioretinitis is a classic and the most common ocular feature of congenital rubella syndrome.

It is also seen in syphilis, RP, trauma.

Orbit – Questions

281. Proptosis with sclerosis of the bony orbit is seen with:
a. Neurofibroma
b. Retinoblastoma
c. Glioma
d. Meningioma

282. Which proptosis is produced by ethmoidal mucocoele:
a. Nasal b. Medial
c. Superior d. Lateral

283. The muscle most commonly involved in thyroid ophthalmopathy is:
a. Inferior rectus
b. Medial rectus
c. Lateral rectus
d. Superior rectus

284. Organism most commonly responsible for orbital preseptal cellulitis:
a. Staph aureus
b. Streptococcus pyogenes
c. H influenza
d. pneumococcus

285. A 4 yr boy presents with fever, proptosis and eye pain. Most likely cause is:
a. Acute frontal sinusitis
b. Retinoblastoma
c. Orbital cellulitis
d. Retrobulbar neuritis

286. Most common cause of unilateral proptosis in children:
a. Retinoblastoma
b. Rhabdomyosarcoma
c. Metastases
d. Ethmoidal sinusitis

287. Global rupture due to blunt trauma is indicated by:
a. Blow-out fracture
b. Lens subluxation
c. Contusion, haemorrhage and low intra-ocular pressure
d. Proptosis and decreased mobility of muscle

288. All of the following are the causes of pseudoproptosis except:
a. Craniofacial synostosis
b. High Myopia
c. ContralateralEnopththalmos
d. Orbital varix

289. Most common malignant intraocular tumor in adult is:
a. Metastatic
b. Retinoblastoma
c. Malignant melanoma
d. Hemangioma

290. Most common cause of unilateral proptosis in adults:
a. Thyrotoxicosis
b. Retinoblastoma
c. Intraocular haemorrhage
d. Raised intracranial tension

291. Which exophthalmometer is useful in children:
a. Hertel's b. Luedde's
b. Moritz d. Simple rule

292. Retinoblastoma can present with all except:
a. Leucocoria
b. Squint
c. Microphthalmos
d. Cataract

293. Optic foramen is situated between:
a. Lesser and greater wing of sphenoid
b. Lesser wing and body of sphenoid
c. Greater wing and body of sphenoid
d. Two roots of lesser wing of sphenoid

281. d	282. d	283. a	284. a	285. c	286. d	287. c	288. d	289. c	290. a
291. b	292. c	293. d							

294. Most common type of optic nerve glioma is:
a. Protoplasmic
b. Pilocytic
c. Gemistocytic
d. Fibrous

295. After removal of retinoblastoma, which tissue is sectioned to find distant metastasis:
a. Optic nerve
b. Vortex vein
c. Central retinal vein
d. Scleral and choroidal tissue

296. In thyrotoxicosis, absence of blinking reflex and incomplete closure of lids is known as
a. Mobius sign
b. Von Graefe's sign
c. Dalrymple sign
d. Stellwag sign

297. Traumatic eye with late presentation of unilateral proptosis and scleral hyperaemia
a. Retrobulbar hematoma
b. Retrobulbar cellulitis
c. Carotico-cavernous fistula
d. Pneumoorbit

298. A 5-yr old child presents with mild proptosis and loss of vision of one eye. On examination, direct pupillary reflex is absent but consensual reflex is present. What is the most probable diagnosis:
a. Retinoblastoma
b. Optic nerve angioma
c. Optic nerve glioma
d. Optic sheath meningioma

299. A 48-yr old lady presents with unilateral mild axial proptosis. There is no history of redness or pain. Which of the following is the most appropriate investigation:
a. CT-Scan to rule out meningioma
b. USG to rule out orbital pseudotumor
c. T_3 T_4 measurement to rule out thyrotoxicosis
d. Doppler to rule out hemangioma

300. A boy presents with diplopia and restriction of eye movements following blunt trauma to his eye. X-ray reveals blow-out fracture of orbit. Which part of orbit is most likely damaged.
a. Superior wall
b. Inferior wall
c. Medial wall
d. Lateral wall

301. Leucocoria can be seen in all except
a. Persistent hyperplastic primary vitreous
b. Congenital glaucoma
c. Fungal endophthalmitis
d. Retinoblastoma

302. Which is not a complication of blunt trauma to eye:
a. Hyphema
b. Retinal detachment
c. Double perforation of iris
d. Iridodialysis

303. Best X-ray view to visualize superior orbital fissure is:
a. AP
b. Basal
c. Towne's
d. Caldwell Luc's view

304. Pseudohypopyon is seen in:
a. Mycotic infection
b. Herpetic infection
c. Sympathetic ophthalmia
d. Retinoblastoma

305. Unilateral pulsating exophthalmos is present in:
a. Orbital varices
b. Cavernous sinus thrombosis
c. Carotico cavernous fistula
d. Toxic thyroid goiter

294. b	295. a	296. d	297. c	298. c	299. c	300. b	301. b	302. c	303. d
304. d	305. c							

306. A patient had running nose and pain over medical aspect of eye being treated with decongestants for many days. He later developed chemosis, protosis and diplopia on abduction of right eye with congestion of optic disc. What is the probable diagnosis?
a. Acute ethmoidal sinusitis
b. Orbital cellulitis
c. Cavernous sinus thrombosis
d. Orbital apex syndrome

307. Earliest sign of cavernous sinus thrombosis is:
a. Proptosis
b. Vomiting
c. Ophthalmoplegia
d. Swelling of lids

308. The average volume of orbit is:
a. 6 cc b. 12 cc
c. 24 cc d. 30 cc

309. Enculeation means
a. Removal of contents of globe
b. Removal of the content of the globe and all of sclera except for a frill around the optic nerve
c. Removal of entire globe along with a portion of optic nerve
d. Removal of the entire contents of orbit

310. Which is the weakest wall of the orbit:
a. Superior b. Media
c. Lateral d. Inferior

311. Vortex vein invasion is commonly seen in:
a. Retinoblastoma
b. Malignant melanoma
c. Optic nerve glioma
d. Medullo-epitheliomas

312. Hereditary retinoblastoma develop the following chromosomal deletion:
a. 13 q 14 b. 13 p 1
c. 14 p 13 d. 14 q 13

313. Frill's excision is done in:
a. Intraocular tumor
b. Endophthalmitis
c. Panophthalmitis
d. F.B. in eye

314. A one year old child having leucocoria was detected to be having a unilateral, large retinoblastoma filling half the globe. Current therapy would involve:
a. Enucleation
b. Chemotherapy followed by local dyes
c. Direct laser abeation using photo dynamic
d. cryotherapy
e. Scleral radiotherapy followed by chemotherapy

315. Fasanella-Servat operation is specifically indicated in:
a. Congenital ptosis
b. Steroid- induced ptosis
c. Myasthenia gravis
d. Horner's syndrome

316. Most common primary malignant intraorbital tumor in children:
a. Retinoblastoma
b. Rhabdomyosarcoma
c. Malignant melanoma
d. Metastases

317. Most common parasitic infestation found in the orbit is:
a. Cysticercosis
b. Entamoeba
c. Onchocerciasis
d. Toxoplasmosis

318. Peripheral orbital space lies between:
a. Bones of orbital wall and periorbita
b. Periorbital tissues and Extraocular muscles
c. In the muscle cone
d. Around the sclera

319. All the nerves pass through SOF except:
a. Oculomotor
b. Optic nerve
c. Trochlear
d. Ophthalmic division of the fifth nerve

306. c	307. c	308. d	309. c	310. b	311. b	312. a	313. c	314. a	315. d
316. a	317. a	318. b	319. b						

320. Exophthalmos is a feature of all except:
a. Carotico-Cavernous fistula
b. Carotid artery aneurysm
c. Myasthenia gravis
d. Neurofibromatosis

321. Proptosis in a young child is produced by following except:
a. Leukemia
b. Retinoblastoma
c. Glioma
d. Meningioma

322. In panophthalmitis, the treatment of choice is:
a. Enucleation
b. Evisceration
c. Exenteration
d. None of the above

323. A 45-yr old male presented with proptosis with reduced upward and downward movements. On USG,there is a cystic lesion in superior rectus that contains hyperdense material. The most likely diagnosis is:
a. Orbital cysticercosis
b. Dermoid
c. emangioma
d. Retinoblastoma

324. SOF lies between
a. Body of sphenoid and Lesser wing of sphenoid
b. Body of sphenoid and greater wing of sphenoid
c. Lesser and Greater wing of sphenoid
d. Zygomatic bone and frontal bone

325. All of the following may cause bilateral proptosis except:
a. Glioma of the optic nerve
b. Craniosynostosis
c. Cavernous sinus thrombosis
d. Thyroid ophthalmopathy

326. Bilateral congenital exophthalmos is seen in:
a. Goldenhar syndrome
b. Cloverleaf skull
c. Horner's syndrome
d. Neurofibromatosis

327. Most common second malignancy in patient of retinoblastoma is:
a. Osteosarcoma
b. Ewing's sarcoma
c. Medulloblastoma
d. Osteoblasts

328 Most common intraocular tumour encroaching the orbit is:
a. Astrocytoma
b. Retinoblastoma
c. Sphenoid wing meningioma
d. medulloblastoma

329. A hectic bout of fever with bilateral proptosis in 25yrs old diabetic following an injury to face is most diagnostic of:
a. Cavernous sinus thrombosis
b. Thyrotoxicosis
c. Intracranial neoplasm
d. Orbital tumour

330. Alkali injury to eye causes:
a. Globe perforation
b. Retinal detachment
c. Optic neuritis
d. Symblepharon

331. Most common fungal infection of the orbit
a. Aspergillosis b. Mucormycosis
c. Candida d. Cryptococcosis

332. Sub-Tenon space is present:
a. Between bones of orbital wall and periorbita
b. Between the periorbita and Extraocular muscles
c. In the muscle cone
d. Between sclera and Tenon capsule

320. c	321. d	322. b	323. a	324. c	325. a	326. b	327. a	328. b	329. a
330. d	331. b	332. d						

Orbit – Explanations

281. D. Meningioma

This is a characteristic finding of bone-invasive sphonoidal wing meningioma

282. D. Lateral

Ethmoidal pathology (present on the medial side of the orbit) would push the orbital structures laterally.

283. A. Inferior rectus

The first and MC muscle to be involved in thyroid eye disease(TED) is inferior rectus. The second muscle is MR

The order is IR> MR> SR> LR> Obliques.

Inferior oblique is the last muscle to be involved

284. A. Staph aureus

Orbital cellulitis and preseptal cellutis are most commonly caused by Staph aureus

285. C. Orbital cellulitis

Orbital cellulitis is characterized by systemic features(fever) and painful proptosis, decreased vision, impaired eyeball motility and abnormal light reflex

286. D. Ethmoidal sinusitis

MCC unilateral proptosis in children is orbital cellulitis

MCC orbital cellulitis in children is ethmoidal sinusitis

287. D. Proptosis and decreased mobility of muscle

Globe rupture would result in escape of aqueous/vitreous resulting in drop in IOP. There would be chemosis at the site of scleral rupture

288. D. Orbital varix

Enophthalmos is sunken eyeball. All other eye lens like proptosis.

289. C. Malignant melanoma

Choroidal melanoma is the MC intraocular tumour in adults.

290. A. Thyrotoxicosis

MCC unilateral and bilateral proptosis in adults is thyroid eye disease

291. B. Luedde's

Luedde's exophthalmometer is useful in children because of the simple design

292. C. Microphthalmos

Microphthalmos and cataract are rare findings. Microphthalmos is a better option than cataract

Microphthalmos is seen in retinoblastoma associated with 13q deletion syndrome

293. D. Two roots of lesser wing of sphenoid

Optic foramen is an opening leading to optic canal within the lesser wing of sphenoid(between its two roots). The optic nerve and the ophthalmic artery pass through the optic foramen

294. B. Pilocytic

Juvenile pilocytic astrocytoma is the most commn type of optic nerve glioma

295. A. Optic nerve

Retrolaminar infiltration fo neoplastic cells would indicate intracranial metastasis of RB. This would necessitate adjuvant high-dose chemotherapy to manage metastasis.

296. D. Stellwag sign

Von Graefe's sign is the lid lag on downgaze

Möbius sign is the inability to maintain convergence of the eyes

Dalrymple sign is the upper lid retraction

297. C. Carotico-cavernous fistula

This is a presentation of CCF due to trauma. It is a delayed presentation. Similar presentation immediately following trauma would be retrobulbar hematoma. Pneumo-orbit would have crepitus.

298. C. Optic nerve glioma

This is a case of optic nerve glioma which presents with slowly progressive painless axial proptosis with loss of vision due to optic atrophy.

299. C. T_3 T_4 measurement to rule out thyrotoxicosis

The MCC of unilateral and bilateral proptosis in adults is thyroid eye disease(TED). So rule out thyroid pathology

300. B. Inferior wall

MC wall involved in blow-out fracture is the floor of the orbit as it is the weakest wall of the orbit. The fracture most commonly occurs at the postero-medial aspect of the floor which is the weakest point of the orbit.

301. B. Congenital glaucoma

Leucocoria – whitish reflex at the pupil is seen in a number of conditions like retinoblastoma, ROP, Coat's disease, endophthalmitis, PHPV, Toxocariasis

302. C. Double perforation of iris

Perforation of iris may be seen in penetrating injuries of the eyeball.

303. C. Towne's

Towne's view is used to visualize the SOF. SOF enlargement may be seen in case of intracranial spread of retinoblastoma, optic nerve tumors

304. D. Retinoblastoma

Pseudohypopyon is due to accumulation of tumor cells in the anterior chamber in case of retinoblastoma due to anterior segment spread of the tumor.

305. C. Carotico cavernous fistula

Pulsating proptosis is typically seen in carotico-cavernous fistula

306. C. Cavernous sinus thrombosis

It started off as ethmoidal sinusitis(runny nose, treated with decongestants).. spread into the orbit to become orbital cellulitis and then got complicated by cavernous sinus thrombosis (diplopia on abduction denotes sixth nerve palsy the earlisest sign of CST)

307. C. Ophthalmoplegia

The earliest sign of CST is sixth nerve palsy leading to limited abduction of eyeball – ophthalmoplegia

308. D. 30 cc

30cc is volume of orbit
6.5cc is volume of eyeball

309. C. Removal of entire globe along with a portion of optic nerve

Removal of contents of globe leaving the scleral shell intact- Evisceration
Removal of the content of the globe and all of sclera except for a frill around the optic nerve – Frill evisceration
Removal of entire globe along with a portion of optic nerve - Enucleation
Removal of the entire contents of orbit – Exenteration

310. D. Inferior

Inferior wall or the floor is the weakest wall because the weakest point of the orbit is located in the posteromedial aspect of the floor

311. B. Malignant melanoma

Malignant melanoma spreads through the vortex veins to result in merstases most commonly seen in the lliver

312. A. 13 q 14

The diagnosis of heritable retinoblastoma is established in a proband **with retinoblastoma (Rb) and a family history of Rb. The majority of individuals with Rb do not have a family history of the disorder. Therefore identification of a** heterozygous germline **RB1** pathogenic variant **on** molecular genetic testing **is necessary to determine if the Rb is heritable in index cases and to allow for early diagnosis and screening for relatives at risk of Rb.**

313. C. Panophthalmitis

Removal of the content of the globe and all of sclera except for a frill around the optic nerve – Frill evisceration
Treatment of choice for panophthalmitis

314. A. Enucleation

The clinical features of this RB comes under Group E of ICRB(International Classification of RB)

Group E tumors are managed by enucleation

315. D. Horner's syndrome

Fasanella Servat procedure is the surgery of choice for the mild ptosis of Horner's syndrome

316. B. Rhabdomyosarcoma

Rhabdomyosarcoma is the most common primary malignant intraorbital tumor in children

Retinoblastoma is the most common primary malignant intraocular tumor in children

317. A. Cysticercosis

It is a parasitic infestation caused by Cysticercus cellulosae, which is the larval form of Taenia solium.

318. B. Periorbital tissues and Extraocular muscles

The space between the periorbita and the four extraocular muscles is called the peripheral orbital space or the anterior space

319. B. Optic nerve

Both the divisions of the oculomotor nerve, trochlear nerve, first division of trigeminal nerve(with its branches), abducens nerve pass through the superior orbital fissure. Vessels passing through SOF are the superior /inferior ophthalmic veins and the recurrent branch of meningeal artery.

320. C. Myasthenia gravis

Proptosis is not seen in myasthenia gravis

Pulsating proptosis is seen in carotico-cavernous fistula

Intracavernous carotid artery aneurysm may cause proptosis

Neurofibromatosis 1 is associated with proptosis due to sphenoid wing dysplasia

321. D. Meningioma

Leukemia in a young child may cause proptosis due to metastatic spread to the orbit or due to chloroma

Retinoblastoma may result in proptosis due to orbital spread of RB or due to aseptic orbital cellulitis.

Optic nerve glioma causes slow, progressive painless axial proptosis in a young child

Optic nerve sheath meningioma is not a tumor of the young. The mean age of persentaion is 40 years.

322. B. Evisceration

Panophthalmitis is a severe type of endophthalmitis. Panophthalmitis is an acute inflammation of the eyeball involving all its structures and extending to the orbit, and is typically caused by virulent pyogenic organisms.

Evisceration is the treatment of choice because of its superior long-term cosmetic outcome and faster recovery compared with enucleation. Enucleation is avoided because of the risk of meningitis.

323. A. Orbital cysticercosis

Orbital cysticercosis is most commonly due to extra-ocular muscle involvement and is characterized by the presence of a cystic lesion with intracystic scolex with a typical USG appearance as described in the question.

324. C. Lesser and Greater wing of sphenoid

The **superior orbital fissure** is the communication between the cavernous sinus and the apex of the orbit and is an opening formed between the lesser and greated wings of the sphenoid bone.

325. A. Glioma of the optic nerve

Craniosynostosis, cavernous sinus thrombosis and thyroid eye disease can cause bilateral proptosis whereas optic nerve glioma causes unilateral proptosis.

326. B. Cloverleaf skull

Horner's syndrome is associated with enophthalmos

There may be unilateral proptosis in neurofibromatosis

Congenital bilateral proptosis is seen in cloverleaf skull – a type of craniosynostosis resulting in shallow orbits bilaterally and prominent bulging eyeballs

327. A. Osteosarcoma

This is common in patients with hereditary retinoblastoma. The risk increases if the hereditary RB patients have been treated with external beam radiotherapy

328. B. Retinoblastoma

Retinoblastoma can extend to the orbit Silent proptosis with manifest intraocular tumor is the usual presentation. Proptosis with inflammation generally indicates reactive sterile orbital cellulitis secondary to intraocular tumor necrosis. Orbital spread of RB is classified as stage III RB under the Children Cancer Group classification of RB

329. A. Cavernous sinus thrombosis

This is a case of Cavernous sinus thrombosis complicating facila trauma, resulting in bilateral proptosis with systemic constitutional signs(fever)

330. D. Symblepharon

Alkali chemicals are lipophilic and penetrate cell membranes through saponification of membrane lipids. Damage to the conjunctiva can lead to scarring, forniceal shortening, symblepharon formation – adhesion of palpebral conjunctiva to globe.

331. B. Mucormycosis

The most common orbital fungal infections is mucormycosis. The initial site of involvement is usually the paranasal sinuses with secondary involvement of the orbit. Rhino-orbital-cerebral mucormycosis (ROCM is most commonly caused by Rhizopus oryzae(90%)

332. D. Around the sclera

Between the sclera and Tenon's capsule

Ocular Adenexae – Questions

333. Ulcerative blepharitis leads to the following complications except:
a. Trichiasis
b. Madarosis
c. Tylosis
d. Poliosis

334. Stye is inflammation of:
a. Gland of Zeis
b. Gland of moll
c. Meibomian gland
d. Lacrimal gland

335. Lid lag on the ptotic side on down-gaze is characteristic of:
a. Congenital ptosis
b. Traumatic ptosis
c. Myogenic ptosis
d. Synkinetic ptosis

336. Commonest tumor of lid is:
a. Adenocarcinoma
b. Basal cell carcinoma
c. Papilloma
d. Squamous cell carcinoma

337. Bilateral ptosis is not seen in:
a. Marfan's syndrome
b. Myasthenia gravis
c. Myotonic dystrophy
d. Kearns-Sayre syndrome

338. Important causes of entropion of upper lid are all except:
a. Trachoma
b. Chemical burn
c. Involutional
d. Steven-Johnson syndrome

339. Wheeler's operation is done in:
a. Ectropion
b. Entropion
c. Ptosis
d. Trichiasis

340. Ptosis with weakness of orbicularis oculi is seen in:
a. Polymyositis
b. Myasthenia gravis
c. Eaton-lambert syndrome
d. Thyrotoxicosis

341. Madarosis is seen in:
a. T.B
b. DM
c. Leprosy
d. Waardenberg's syndrome

342. Average height of palpebral fissure is:
a. 8mm
b. 9mm
c. 10mm
d. 11mm

343. Everbusch's operation is done for:
a. Proptosis
b. Ptosis
c. Lagophthalmos
d. Entropion

344. Conjunctivoplasty is indicated for
a. Cicatrical ectropion
b. Senile entropion
c. Senile ectropion
d. Cicatrical entropion

345. Modified Kuhnt Szymanowski procedure is done for:
a. Proptosis
b. Ectropion
c. Entropion
d. Ptosis

346. Chalazion is a chronic inflammatory granuloma of:
a. Meibomian gland
b. Zeis' gland
c. Sweat gland
d. Wolfring's gland

347. Cause of pseudoptosis is :
a. Third nerve palsy
b. Pthisis bulbi
c. Lid retraction
d. Seventh nerve palsy

348. Surgery done in Marcus Gunn ptosis:
a. Fasanella Servat
b. Levator Resection
c. Levator disinsertion with Frontalis sling
d. Wheelers operation

333. d	334. a	335. a	336. c	337. a	338. b	339. b	340. b	341. c	342. c
343. b	344. c	345. b	346. a	347. b	348. c				

349. Commonest cause of cicatrical entropion in India is:
a. Trachoma b. TB
c. Burns d. Trauma

350. Fasanella Servat procedure is done for:
a. Severe ptosis
b. Mild ptosis
c. Involutional Ptosis
d. Jaw-Winking phenomenon

351. Painful condition of the eyelids among this:
a. Meibomian cyst
b. Malignant melanoma
c. Hordeolum externum
d. Sebaceous cell carcinoma

352. Blepharophimosis is generally associated with all of the following except:
a. Ectropion b. Distichiasis
c. Epicanthus d. Telecanthus

353. Ankyloblepharon is:
a. Adhesion of globe to the lid
b. Adhesion of both the lids
c. Adhesion of the lids to the fornix
d. Adhesion of lid to globe not involving the fornix

354. Ptosis in Horner's syndrome is due to paralysis of:
a. Riolan's muscle
b. Horner's muscle
c. Muller's muscle
d. Orbicularis oculi muscle

355. Hypertrophy of lid edge is called:
a. Lagophthalmos
b. Tylosis
c. Ectropion
d. Entropion

356. Most common intraorbital metastatic tumour in children is:
a. Non-Hodgkins lymphoma
b. Neuroblastoma
c. Ca Nasopharynx
d. Malignant melanoma

357. Which type of retinoblastoma causes retinal detachment:
a. Glioma exophytum
b. Glioma endophytum
c. Glioma planum
d. All of above

358. The operation for plication of lower lid retractors is done for :
a. Senile ectropion
b. Senile entropion
c. Cicatrical entropion
d. Paralytic entropion

359. Most common type of Ptosis
a. Aponeurotic b. Neurogenic
c. Myogenic d. Mechanical

360. Lipogranulomatous inflammation is seen in –
a. Fungal infection
b. Tuberculosis
c. Chalazion
d. Viral infection

361. Most common site of BCC in the lid
a. Lower lid
b. Upper lid
c. Medial canthus
d. Lateral canthus

362. Stye is staphylococcal infection of
a. Hair follicle
b. Gland of Zeis
c. Gland of Moll
d. Lid margin

363. Weiss operation is done for?
a. Weiss operation is done for?
b. Senile entropion
c. Senile ectropion
d. Cicatricial ectropion

349. a	350. b	351. c	352. b	353. b	354. c	355. b	356. b	357. a	358. b
359. a	360. c	361. a	362. a	363. b					

Ocular Adenexae – Explanations

333. D. Poliosis

Ulcerative blepharitis can result in entropion and therefore, trichiasis, thickening of lid margin (tylosis), loss of eyelashes(madarosis)

Poliosis is seen in VKH syndrome

334. A. Gland of Zeis

Stye is acute suppurative inflammation of gland of Zeis

335. A. Congenital ptosis

This is one of the diagnostic features of congenital ptosis

336. C. Papilloma

Most common lid tumor is papilloma

Most common malignant lid tumor is basal cell carcinoma

337. A. Marfan's syndrome

Ptosis is not an ocular feature of Marfan's syndrome

Myasthenia gravis is the MCC of bilateral ptosis

338. C. Involutional

Involutional or senile entropion commonly affects the lower lid

Trachoma, Chemical burn and SJ cause cicatricial entropion of lids. Trachoma affects only the upper lid

339. B. Entropion

Surgeries for Entropion.

Jone's procedure

Weiss procedure

Wheeler's operation

340. B. Myasthenia gravis

Myasthenia gravis is a disorder of the neuromuscular junction and very often presents with ocular myasthenia.

341. C. Leprosy

Madarosis is loss of eyebrows/ eyelashes

Seen in hypothyroidism, leprosy

342. C. 10 mm

The distance between the upper and lower lid margins is the palpebral fissure height and it measures 10mm on an average

343. B. Ptosis

LPS resection through the skin approach for ptosis correction is called Everbusch's procedure.

344. C. Senile ectropion

Medial conjunctivoplasty is done to correce senile ectropion.

345. B. Ectropion

This is done for involutional or senile ectropion

346. A. Meibomian gland

347. B. Levator disinsertion with Frontalis sling

lid retraction in one eye would appear the other normal eyelid to appear ptosed – pseudoptosis

348. C. Levator excision with Frontalis sling

Marcus Gunn jaw winking phenomenon occurs in 5% of congenital ptosis. This is managed by LPS disinsertion-combined with tarsofrontalis sling

349. A. Trachoma

MCC of cicatricial entropion (of upper lid) is trachoma

350. B. Mild ptosis

Fasanella Servat procedure is the surgery of choice for the mild ptosis of Horner's syndrome

351. C. Hordeolum externum

Stye or hordeolum externum is an acute painful condition due to acute acute suppurative inflammation of the gland of Zeis.

352. B. Distichiasis

Blepharophimosis is associated

with bilateral myogenic ptosis, epicanthus inversus, telecantus, ectropion of the lower lid

353. B. Adhesion of both the lids

adhesion of the margins of the two lids is called ankyloblepharon. May be congenital or due to burns, chemical injuries.

354. C. Muller's muscle

Horner's muscle is sympathetic palsy affecting the Muller's muscle which is an accessory muscle of lid elevation. Muller's muscle has sympathetic innervation. This is the reason for mild ptosis in Horner's syndrome

355. B. Tylosis

Tylosis – thickening of lid margin
Lagophthalmos – incomplete lid closure
Ectropion – outward turning of lid margin
Entropion – inward turning of lid margin

356. B. Neuroblastoma

MC intraorbital malignancy in children is orbital metastases whose primary is neuroblastoma of adrenal medulla
It is also the MCC of bilateral proptosis in children

357. A. Glioma exophytum

Exophytic growth of retinoblastoma causes serous type of retinal detachment

358. B. Senile entropion

Plication of lower lid retractors(inferior tarsal muscle originating from fibres of from Inferior rectius) is done for senile entropion of lower lid

359. A. Aponeurotic

Most common type of ptosis is aponeurotic in origin. It is also known as involutional or senile ptosis. The cause is most commonly idiopathic.

360. C. Chalazion

Chalazion is chronic lipogranulomatous inflammation of meibomian gland

361. A. Lower lid

MCC site of basal cell carcinoma is lower lid
Second MCC site of basal cell carcinoma is medial canthus

362. A. Hair follicle

Stye is acute suppurative inflammation of Gland of Zesis hair follicle > Zeis

363. B. Senile entropion

- Weiss operation is done for senile entropion.
- An incision is placed 3mm below the lid margin extending along the whole length of the eyelid.
- It involved the skin, orbicularis and the tarsal plate.
- Mattress sutures are used for correcting the entropion by transpositioning the tarsus.

364. d	3
374. c	

Lacrimal Drainage System – Questions

364. Watering from the eyes of an infant occurs in all of the following except:

a. Congenital dacryocystitis
b. Buphthalmos
c. Corneal foreign body
d. Corneal dystrophy

365. Mother of 3 months old infant complains of watering from one eye. On pressing the lacrimal sac, there is regurgitation of mucopurulent material. The appropriate treatment is:

a. DCR
b. Probing
c. Probing with syringing
d. Lacrimal sac massage and antibiotics

366. Most common ocular finding in mumps is:

a. Chorio- retinitis
b. Anterior uveitis
c. Haemorrhagic conjunctivitis
d. Dacryoadenitis

367 Chronic dacryocystitis is more common in:

a. Children b. Elderly male
c. Women d. Young males

368. Most common organism causing chronic dacryocystitis is:

a. Staph aureus
b. Pseudo pyocyanea
c. Streptococcus haemolyticus
d. Mycotuberculosis

369. Most common tumor of lacrimal gland is:

a. Adenoid cystic carcinoma
b. Adenocarcinoma
c. Benign mixed tumor
d. Mucoepidermoid carcinoma

370. In DCR operation, opening in nose is made in:

a. Superior meatus
b. Inferior meatus
c. Middle meatus
d. Superior turbinate

371. Valve at the entry of the common canaliculus:

a. Valve of Hasner
b. Valve of Rosenmuller
c. Both
d. None

372. Nerve for tear secretion is:

a. Greater superficial petrosal nerve
b. Facial nerve
c. Deep petrosal nerve
d. Maxillary nerve

373. DCR is contraindicated in

a. Mucocoele
b. Chronic dacryocystitis
c. NLD obstruction
d. Malignancy of the lacrimal sac

374. Distance of Angular vein from medial canthus as it passes over medial palpebral ligament is:

a. 6mm b. 10mm
c. 8mm d. 12mm

375. Initial treatment of lacrimal mucocoele is

a. DCR
b. Lacrimal sac massage
c. DCT
d. Probing

376. Syndrome characterized by symmetrical enlargement of lacrimal and salivary glands:

a. Sjogren's syndrome
b. Mikulikz syndrome
c. Sturge Weber
d. KCS

364. d	365. d	366. d	367. c	368. a	369. c	370. c	371. b	372. a	373. d
374. c	375. b	376. b							

377. Thickness of tear film is:

a. 5μ b. 6μ
c. 7μ d. 8μ

378. Which of the following is false:

a. Normal BUT is more than 10 secs
b. Jones dye test is used for dry eye
c. Rose Bengal stains dead cells
d. Acetycysteine dissolves mucus

379. Ideal time for syringing and probing is:

a. 2-3 months b. 4-6 months
c. 1year d. 2 yrs

380. The alignment of lower and upper puncta are:

a. Upper puncta is medial to lower puncta
b. Lower puncta is medial to upper puncta
c. They superimpose each other
d. None of the above

381. The density of goblet cells are maximum in

a. Nasal conjunctiva
b. Temporal conjunctiva
c. Superior conjunctiva
d. Inferior conjunctiva

382. NLD opens in the inferior meatus

a. Anteriorly b. Posteriorly
c. medially d. Laterally

383. Sequelae of acute dacryocystitis:

a. Mucocoele
b. Chronic dacryocystitis
c. Lacrimal fistula
d. lacrimal perforation

Lacrimal Drainage System – Explanations

364. D. Corneal dystrophy

Congenital dacryocystitis due to nasolacrimal duct obstruction, buphthalmos due to congenital glaucoma, corneal foreign bodya re all differential diagnosis of watering in an infant.

365. D. Lacrimal sac massage and antibiotics

This is congenital dacryocystitis due to congenital nasolacrimal duct obstruction.

Management protocol of CONGENITAL NASOLACRIMAL DUCT OBSTRUCTION

Birth - 9months : Crigler's lacrimal sac massage + antibiotic eyedrops

9months - 4yrs of age:
- Syringing & probing

After 4yrs of age:
- DCR

366. D. Dacryoadenitis

Dacryoadenitis is inflammation of lacrimal gland

367. C. Women

Due to the anatomy of NLD in females which is usually narrower

368. A. Staph aureus

369. C. Benign mixed tumor

Most common lacrimal gland tumor is pleomorphic adenoma a.k.a. benign mixed tumor.

Most common lacrimal gland malignancy is adenocystic carcinoma

370. C. Middle meatus

DCR surgery makes a connection between the lacrimal sac and the middle meatus

371. B. Valve of Rosenmuller

The entry of common canaliculus into the lacrimal sac is guarded by the vavleve of Rosenmuller which prevents backflow of tears.

372. A. Greater superficial petrosal nerve

The greater superficial petrosal nerve (GSPN) is a branch of the facial nerve that participates in innervation of the lacrimal gland and mucous membranes of the nasal cavity and palate

373. D. Malignancy of the lacrimal sac

In case of lacrimal sac malignancy, dacryocestectomy is performed

374. C. 8mm

The angular vein is formed by the junction of the supratrochlear **vein** and supraorbital **vein**, runs obliquely downward by the side of the nose; it **passes 8mm medial to the anterior lacrimal crest**

375. B. Lacrimal sac massage

The management of lacrimal mucocele follows the same protocol as congenital NLD obstruction/ congenital dacryocystitis.

376. B. Mikulikz syndrome

any bilateral chronic enlargement of the lacrimal and salivary glands due to a specific disease process other than Mikulicz disease (benign lymphoepithelial lesion) is called Mikulicz syndrome

377. C. 7μ

The precorneal tearfilm is 7microns in thickness. The majority is formed by the middle aqueous component secreted by the lacrimal gland.

378. B. Jones dye test is used for dry eye

Jones test is used to assess the cause of epiphora (overflow of tears)

379. C. 1year

Syringing and probing is usually done after the age of 9 months. So 1 year is the best option here.

380. A. Upper puncta is medial to lower puncta

Lower punctum is laterally located so that the two puncta do not appose during blinking.

381. A. Nasal conjunctiva

Goblet cells which secrete the inner mucin layer of tear film are maxim in the inferonasal quadrant of bulbar conjunctiva. (Nasal > inferior)

382. A. Anteriorly

The nasolacrimal duct passes downwards, backwards and laterally to open anteriorly into the inferior meatus

383. C. Lacrimal fistula

The acute dacryocystitis is characterised by a painful swelling in the medial canthal region. The abscess usually points below and to the outer side of the sac owing to gravitation of the pus. If it bursts spontaneously, pus continues to be discharged for some time, and a permanent fistula is likely to result

Neuro-ophthalmology – Questions

384. First field defects seen in pituitary adenomas are:

a. Homonymous infero-nasal field defect
b. Homonymous supero-temporal field defect
c. Heteronymous infero-nasal field defects
d. Heteronymous supero-temporal field defects

385. Supranuclear lesions are characterized by all of the following except:

a. Gaze Palsies
b. Absence of diplopia
c. Normal reflex movement
d. Abnormal retinal correspondence

386. Which of the following is true regarding cortical blindness:

a. Direct and Consensual reflex absent in both eyes.
b. Direct and Consensual reflex present in both eyes.
c. Direct reflex present and Consensual reflex absent on affected side.
d. Direct reflex present and consensual reflex absent on normal side.

387. Bitemporal hemianopia is seen in which condition:

a. Retinoblastoma
b. Aneurysm circle of willis
c. Temporal SOL
d. Frontal SOL

388. The typical field defect in tobacco amblyopia is:

a. Central
b. Centrocaecal
c. Segmental
d. Enlargement of blind spot

389. Retrobulbar neuritis is characterized by all except:

a. Afferent pupillary defect
b. Sudden diminution of vision
c. Pain on elevation of eye ball
d. Blurred disc margin

390. Superotemporal quadrantopia is caused by:

a. Parietal lobe tumor
b. Frontal lobe tumor
c. Temporal lobe tumor
d. Pituitary tumor

391. Papillitis is characterized by all of the following except:

a. Sudden loss of vision
b. Disc edema
c. Hyperemic disc
d. Normal pupillary response

392. False about Argyll Robertson Pupil is?

a. Accommodation reflex normal
b. Direct pupillary reflex absent
c. Indirect pupillary reflex noral
d. Visual acuity normal

393. Functional defect of optic nerve can be diagnosed by:

a. Direct ophthalmoscopy
b. Indirect ophthalmoscopy
c. Perimetry
d. Retinoscopy

394. All of the following are true about papilledema except:

a. Blurring of disc margin
b. Congestion of retinal veins
c. Soft exudates around the disc
d. Sudden loss of vision

395. Right Superotemporal quadrantopsia, left centrocaecal scotoma with headache: site of lesion is:

a. Left optic nerve + chiasma
b. Left optic tract + chiasma
c. Right optic nerve + chiasma
d. Right optic tract + chiasma

384. d	385. d	386. b	387. b	388. b	389. d	390. d	391. d	392. c	393. c
394. d	395. a								

396. Ipsilateral optic atrophy with contralateral disc edema is seen in :
a. Fisher syndrome
b. Foster- Kennedy syndrome
c. Vogt- koyanagi – Harada syndrome
d. WAGR syndrome

397. All of the following are caused by third palsy except:
a. Ptosis
b. Mydriasis
c. Medial deviation of eyeball
d. Pupillary reflex lost

398. In unilateral afferent pupillary defect, when light is moved from normal to affected eye, there is:
a. Dilatation on affected side and constriction on normal side.
b. Dilatation on normal side and constriction on affected side.
c. Dilatation in both pupils
d. Constriction in both pupils

399. All of the following can cause optic neuropathy except:
a. Rifampicin b. Digoxin
c. Chloroquine d. Ethambutol

400. A 40 yrs. old lady presents with bilateral papilledema. CT-Scan shows normal ventricles, diagnosis is:
a. Benign intracranial hypertension
b. Malignant hypertension
c. Papillitis
d. Raised intraocular pressure

401. Chalky white optic disc on fundus examination is seen in all except
a. Toxic optic neuropathy
b. Leber's hereditary optic neuropathy
c. Post-papilledema optic atrophy
d. Traumatic injury to the optic nerve

402. Unilateral proptosis with bilateral VIth nerve palsy, diagnosis is:
a. Grave's disease
b. Retinoblastoma
c Pseudotumor of orbit
d. Cavernous sinus thrombosis

403. First sign of optic nerve disease:
a. Papilloedema
b. Color blindness
c. Afferent pupillary defect
d. Efferent pupillary defect

404. Wernicke's hemianopic pupillary response is seen in lesions at :
a. Optic tract
b. Optic chiasma
c. Optic radiation
d. Lateral geniculate body

405. A patient with supraasellar extension of pituitary tumor present with:
a. Bitemporal hemianopia
b. Binasal hemianopia
c. Pie in sky
d. Right homonymous hemianopia

406. Left- sided gaze is affected in lesion of:
a. Right frontal lobe
b. ight occipital lobe
c. Left occipital lobe
d. Left frontal lobe

407. All are features of optic nerve disease except:
a. Afferent pupillary defect
b. Sudden loss of vision
c. Headache and vomiting
d. Pain on movement of eyeball

408. All are true regarding optic neuritis except:
a. Decreased visual acuity
b. Decreased pupillary response
c. Abnormal electroretinogram
d. Abnormal visual evoked response

409. Vitamin B-12 deficiency is likely to cause:
a. Bitemporal hemianopia
b. Binasal hemianopia
c. Heteronymous hemianopia
d. Centrocaecal scotoma

410. Fundoscopic features of papilledema include all except:
a. Blurred disc margin
b. Deep cup
c. Absent venous pulsations
d. Bending of blood vessels

396. b	397. c	398. c	399. a	400. a	401. c	402. d	403. c	404. a	405. a
406. a	407. c	408. c	409. d	410. b					

411. Miner's nystagmus is:
a. Vertical b. Rotatory
c. Horizontal d. Pendular

412. Internal ophthalmoplegia occurs in:
a. Diabetes b. Syphilis
c. Diphtheria d. All of the above

413. Heteronymous hemianopia is seen in all except:
a. Chromophobe adenoma
b. B/L aneurysm of internal carotid artery
c. Occipital lobe lesion
d. Chiasmal lesion

414. Length of intraorbital optic nerve is:
a. 10 mm b. 6 mm
c. 1 mm d. 25 mm

415. In Weber's syndrome, there is:
a. 4th nerve palsy
b. 3rd nerve palsy
c. 5th nerve palsy
d. 7th nerve palsy

416. A 25 yrs old lady suddenly develops unilateral loss of vision decreasing from 6/6 to 4/60 with ill-sustained reaction of the pupil. She complains of pain in eye when looking upwards. The most likely diagnosis:
a. Acute frontal sinusitis
b. Acute iritis
c. Brain tumor
d. Retrobular neuritis

417. Pupillomotor fibres of third cranial nerve travel along with:
a. Nerve to medial rectus
b. Nerve to superior rectus
c. Nerve to inferior rectus
d. Nerve to inferior oblique

418. Cerebello-pontine angle tumour produces following at the earliest:
a. Diplopia
b. Loss of corneal reflex
c. Ipsilateral squint
d. Ipsilatersal tongue paralysis

419. Optic disc in consecutive optic atrophy is characterized by:
a. Cupping b. hyperemia
c. Pink color d. Yellow pallor

420. In pupillary reflex arc,the connection from pretectal nucleus to EWN is in which neuron order:
a. First b. Second
c. Third d. Fourth

421. U/L third nerve palsy with C/L SR palsy and B/L ptosis.Lesion involves:
a. Cavernous sinus
b. Peripheral fibres of one nerve and sup erior fibres of C/L nerve
c. Multiple sites
d. Third nerve nuclear complex

422. Diplopia with limitation of adduction of right eye with abduction saccades of left eye and normal convergence is due to
a. Duane's retraction syndrome
b. Partial 3rd nerve palsy
c. Internuclear ophthalmoplegia
d. Absence of medial rectus

423. Features of Horner's syndrome caused by Pancoast tumor are all the following except:
a. Miosis
b. Ptosis
c. Excessive sweating
d. Loss of ciliospinal reflex

424. Bielschowsky test is used in which cranial nerve palsy:
a. I N b. II N
c. III N d. IV N

425. In oculomotor palsy, involved artery is:
a. Posterior communicating artery
b. Middle cerebellar artery
c Superior cerebellar artery
d. Anterior communicating artery

426. Pupillary reflex is retained in lesion of:
a. Optic nerve
b. Oculomotor nerve
c. Ciliary ganglion
d. Lateral geniculate body

411. d	412. c	413. d	414. d	415. b	416. d	417. d	418. b	419. d	420. c
421. d	422. c	423. c	424. d	425. a	426. d			

427. Adverse effect in eye in oral contraceptives is:

a. BIH
b. Ring scotoma
c. Optic neuritis
d. Nystagmus

428. True about blind spot is:

a. It is an absolute scotoma
b. It is a negative scotoma
c. It is a relative scotoma
d. Both A and B

429. Painless loss of vision is seen in all except :

a. Papilloedema
b. Papillitis
c. Angle closure glaucoma
d. CRAO

430. Methyl alcohol cause blindness by acting on :

a. Ganglion cells
b. Nerve fibres
c. Rods and cones
d. Rods only

431. Most common ocular feature of NF2

a. Juvenile PSC
b. Epiretinal membranes due to juvenile muller cells.
c. gliomas
d. lisch nodules

432. Leber's optic neuropathy has the following features except:

a. It commonly affects healthy males
b. It causes bilateral painless, progressive and permanent visual loss
c. Pupillary reflexes are affected early in the disease
d. Typical visual field defects are centrocaecal which eventually become absolute

433. Horizontal gaze centre of eye is located in

a. Pons
b. Midbrain
c. Hypothalamus
d. Cerebellum

434. Ophthalmoplegic migraine is best characterised as?

a. Recurrent headache with transient palsy of ophthalmic nerve
b. Headache associated with irreversible palsy of 3rd nerve
c. Recurrent headache with transient palsy of 3, 4 and / or 6th cranial nerves
d. Headache with optic neuritis

427. a	428. d	429. c	430. a	431. a	432. a	433. a	434. c

Neuro-ophthalmology – Explanations

384. D. Heteronymous supero-temporal field defects

Pituitary tumors initially affect the bilateral inferonasal fibres crossing at the optic chiasma resulting in bilateral heteronymous superotemporal quadrantic field defects.

385. D. Abnormal retinal correspondence

386. B. Direct and Consensual reflex present in both eyes

Lesions of visual cortex do not affect the pupillary light reflex as the pupillary light fibres exit the visual pathway at the optic tract.

387. B. Aneurysm circle of willis

Aneurysm of circle of Willis compresses the bilateral crossing nasal fibres in the optic chiasm to produce a bitemporal hemianopia

388. B. Centrocaecal

Tobacco affects the papillomacular bundle of nerve fibres to produce a typical bilateral centrocaecal scotoma

389. D. Blurred disc margin

Retrobulbar neuritis is characterized by sudden decrease in vision with pain on eye movements and RAPD (relative afferent pupillary defect) but with normal-looking fundus.

390. D. Pituitary tumor

Heteronymous superotemporal quadrantanopia is caused by early pituitary tumors that initially compress the bilateral crossing inferonasal fibres.

391. D. Normal pupillary response

Papillitis is characterisd by sudden painless decrease in vision

The optic disc is inflamed – hyperemia and blurred disc margins are seen

392. C. Indirect pupillary reflex normal

In Argyll-Robertson pupil.

Accommodation reflex (near reflex) is normal.

Pupillary reflex (light reflex) – both direct and indirect – are absent.

This is known as light – near dissociation.

393. C. Perimetry

Optic nerve pathologies would show changes in the visual field which are detected using perimetry.

394. D. Sudden loss of vision

In early papilledema, the visual acuity is not affected per se except for blurring of vision.

In late stage, the visual acuity drops as atrophic changes of the optic nerve set in.

395. A. Left optic nerve + chiasma

This is called junctional scotoma of Traquair. It is due to lesion at the junction of optic nerve and chiasma. This affects the ipsilateral optic nerve and the von Willebrandt knee containing the contralateral inferonasal fibres. This results in ipsilateral centrocaecal scotoma and contralateral superotemporal quadrantanopia

396. B. Foster- Kennedy syndrome

Foster Kennedy syndrome occurs due to frontal lobe tumor

True Foster Kennedy syndrome is the combination of papilledema in one eye and pallor in the other eye due to a large mass lesion causing ipsilateral compressive optic neuropathy and increasing intracranial pressure causing contralateral disc edema. It is typically caused by an olfactory groove meningioma.

397. C. Medial deviation of eyeball

Third nerve (oculomotor nerv palsy results in ptosis (due to LPS palsy), mydriasis and absence of pupillary light

reflex (due to sphincter palsy), down and lateral deviation of eyeball.

398. C. Dilatation in both pupils

Dialation in both pupils due to the recovery of both pupils from the previous constriction when light was on the normal eye.

399. A. Rifampicin

Other drugs causing optic neuropathy are aspirin, iron, isoniazid, chloramphenicol.

400. A. Benign intracranial hypertension

Pseudotumor cerebri or benign intracranial hypertension(BIH) or idiopathich intracranial hypertension(IIH) is characterized by papilledema and raised intracranial tension but neuro-imaging shows normal size of the ventricles.

401. C. Post-papilledema optic atrophy

Chalky white optic disc is seen in primary optic atrophy

Optic atrophy occurring after papilledema is secondary type of atrophy with a dirty white optic disc

402. D. Cavernous sinus thrombosis

This is seen when cavernous sinus thrombosis becomes bilateral. Sixth nerve pasly is the earliest sign of cavernous sinus involvement.

403. C. Afferent pupillary defect

Abnormal pupillary light reflex is the earliest sign of optic nerve disease as optic nerve is the afferent in the light reflex arc.

404. A. Optic tract

Optic tract lesion causes Wernicke's hemianopic pupil wherein light shone on ipsilateral temporal half of retina/ contraleral nasal half of retina do not elicit pupillary light reflex whereas the pupil constricts when light is shone on the ipsilateral nasal hemiretina/ contralateral temporal hemiretina

405. A. Bitemporal hemianopia

Pituitary tumors with suprasellar extension are characterised by the hallmark field defect – BITEMPORAL HEMIANOPIA

406. A. Right frontal lobe

Horizontal Gaze is initiated by contralateral frontal eye field and is controlled by ipsilateral horizontal gaze centre in pons - paramedian pontine reticular formation(PPRF). Left gaze palsy would be caused by contralateral (right) frontal lobe lesion.

407. C. Headache and vomiting

The options are related to retrobulbar neuritis which is characterized by sudden loss of vision with pain on eye movements and RAPD (relative afferent pupillary defect). The most common cause is the demyelinating disease, multiple sclerosis. There is no feature of raised ICT in this condition.

408. C. Abnormal electroretinogram

Optic neuritis is characterized by sudden loss of vision, RAPD and abnormal visual evoked response(VER) due to delay in the nerve conduction through the affected optic nerve.

409. D. Centrocaecal scotoma

Vitamin B12 deficiency produces a classical visual field defect which is bilateral centrocecal scotoma

410. B. Deep cup

IN disc edema, the cup gets filled due to the axoplasmic stasis – cup is obliterated and not deep.

411. D. Pendular

Miner's nystagmus is a pendular nystagmus. It was associated with decrease in vision, photophobia, and night-blindness.

412. B. Syphilis

Internal ophthalmoplegia means involvement limited to the pupillary sphincter and ciliary muscle. This is seen due to ciliary ganglion involvement in diphtheria.

413. D. Chiasmal lesion

heteronymous hemianopia is seen only in chiasmal lesions. Chromophobe adenoma(pituitary tiumor), bilateral

aneurysm of ICA are lesions affecting the bilateral crossing nasal fibres at the optic chiasma.

414. D. 25 mm

415. B. 3rd nerve palsy

Weber's syndrome is characterized by ipsilateral third nerve palsy and contralateral hemiplegia due to lesion at the cerebral peduncle.

416. D. Retrobular neuritis

This is a classical presentation of retrobulbar neuritis – sudden loss of vision with pain on eye movements and abnormal pupillary light reflex.

417. D. Nerve to inferior oblique

The parasympathetic fibres to the sphincter pupillae and ciliary muscles pass through the inferior division of oculomotor nerve and then through the nerve to Inferior oblique.

418. B. Loss of corneal reflex

Loss of corneal reflex due to involvement of trigeminal nerve.

419. D. Yellow pallor

Consecutive optic atrophy is characterized by waxy yellow pallor of optic disc

420. D. Fourth

Neurons of the light reflex pathway:
First order neurons – Bipolor
Second order: bipolar cells
Third order: ganglion internuncial neurons(**pretectal nucleus to Edinger-Westphal nucleus)**

421. D. Third nerve nuclear complex

The Superior rectus subnucleus innervates the contralateral SR muscle and the central caudal nucleus of LPS is a single subnucleus innervating bilateral LPS. Therefore, lesion of oculomotor nucleus would cause bilateral ptosis and contralateral SR palsy along with ipsilateral MR,IR,IO palsy.

422. C. Internuclear ophthalmoplegia

This is a classical picture of INO – ipsilateral abduction deficit and contralateral abductin nystagmus
In this question, it is right Internuclear Ophthalmoplegia

423. C. Excessive sweating

Horner's syndrome is characterized by ptosis, miosis, anhidrosis(absence of sweating), enophthalmos and loss of ciliospinal reflex.

424. D. IV N

The Parks–Bielschowsky three-step test, also known as Park's three-step test or Bielschowsky head tilt test, is a method used to isolate the paretic extraocular muscle, particularly superior oblique muscle and trochlear nerve (IVth cranial nerve),

425. A. Posterior communicating artery

Aneurysm of Posterior communicating artery can cause third nerve palsy with earlier involvement of the pupillary fibres.

426. D. Lateral geniculate body

Lesions of LGB do not affect the pupillary light reflex as the pupillary light fibres exit the visual pathway at the optic tract.

427. A. BIH

OCPs are a risk factor for BIH. Tetracyclines, vitamin A toxicity ae other risk factors

428. D. Both A and B

Optic disc is the physiological blindspot which produces an absolute negative scotoma

429. C. Angle closure glaucoma

Angle closure attack presents as a sudden painful decrease in vision

430. A. Ganglion cells

The formic acid(mainly) and formaldehyde produced by methanol are toxic to the retinal ganglion cells.

431. A. Juvenile PSC

PSC is present in 2/3rd patients

432. C. Hypothalamus

LHON is a itochondrial disorder due

to mitochondrial mutation and is maternally transmitted. It usually affects males. It is characterised by bilateral, sequential optic nerve involvement.

433. A. Pons

Paramedian pontine reticular formation(PPRF) in the pons is the horizontal gaze centre)

434. C. Recurrent headache with transient palsy of 3, 4 and / or 6th cranial nerves

OPHTHALMOPLEGIC MIGRAINE is a rare condition which was previously considered as a type of migraine. it IS likely to be an inflammatory cranial neuropathy. The International Headache Classification has reclassified ophthalmoplegic migraine as a type of neuralgia from its earlier classification as a type of migraine. It is characterised by transient migraine like headache associated with paresis of oculomotor, trochlear and/or abducens nerves. To arrive at a diagnosis of ophthalmoplegic migraine, other causes should be ruled out by appropriate investigations (like digital subtraction angiography / magnetic resonance angiography of the brain).

Good to note

Squint and Optics – Questions

435. Uncrossed diplopia is seen in –

a. Esophoria b. Exophoria
c. Esotropia d. Exotropia

436. Which of the following material is best suited for manufacture of gas permeable contact lenses –

a. Glass
b. Methyl methacrylate
c. Silicone
d. Rubber

437. Fixation of visual reflexes is accomplished by –

a. 6 mth b. 1 yr
b. 2 yr d. 3yr

438. True regarding LR palsy is –

a. Crossed diplopia
b. Uncrossed diplopia
c. Divergent squint
d. Pupillary dilation

439. Treatment of choice in aphakia is–

a. Spectacles
b. Contact lens
c. Intra –ocular lens
d. Epikerato phakia

440. Most important factor to focus rays on retina

a. Lens
b. Corneal curvature
c. Axial
d. Media length of eyeball

441. The power of eye is –

a. 15D b. 29D
c. 60D d. 100D

442. Secondary deviation is more than primary deviation in:–

a. Spastic squint
b. Paralytic squint
c. Concomitant squint
d. Inconcomitant squint

443. Which is the most common type of amblyopia

a. Strabismic
b. Anisometropic
c. Sensory deprivation
d. Emmetropic

444. treatment of amblyopia in a 3 yr old child is –

a. Orthoptic exercises
b. Occlusion of one eye
c. Prism
d. Surgery

445. Treatment of accomodative strabismus is

a. Orthoptic exercises
b. Lens implant
c. Refractive correction
d. Prism correction

446. Amblyopia should be corrected at what age

a. <5 yr of age b. 5-8 yr age
c. 8-12 yr age d. 10-15 yr age

447. All are true about paralytic strabismus except:

a. Binocular diplopia
b. False orientation
c. Primary deviation = secondary deviation
d. False projection

448. Fluctuating refractive errors with cataract are seen in -

a. Morgagnian cataract
b. Diabetic cataract
c. Intumescent cataract
d. Traumatic cataract

449. Downward movement of abducted eyeball is action of –

a. IO b. SO
b. IR d. SR

450. Infant is physiologically

a. Myopic b. Hypermetropic
c. Astigmatic d. Emmetropic

435. c	436. c	437. a	438. b	439. c	440. b	441. c	442. b	443. b	444. b
445. c	446. a	447. c	448. c	449. c	450. b				

451. All are features of paralytic squint except
a. Confusion b. Deviation
c. Stereopsis d. Diplopia

452. Which is not a clinical feature of right sided VI th nerve palsy-
a. Convergent squint
b. Face turn to left
c. Inability to abduct right eye
d. Diplopia

453. Action of superior oblique muscle is:
a. Intorsion b. Extorsion
b. Depression d. Abduction

454. All are macular function test except-
a. Maddox rod test
b. Two point discrimination test
c. Electroretinogram
d. Laser interferometry

455. Soft contact lens uses have high tendency to develop-
a. Recurrent corneal ulcer
b. Acanth amoeba ulcer
c. Pseudomonas infection
d. Pneumococcal infection

456. Inverted Purkinje image is seen on
a. Anterior surface of cornea
b. Anterior surface of lens
c. Posterior surface of cornea
d. Posterior surface of lens

457. Magnification caused by direct ophthalmoscope is –
a. 5 times b. 15 times
c. 50 times d. 10 times

458. A lady using contact lens developed photophobia, blurred vision and watery discharge was diagnosed to be suffering from over-wearing syndrome. Most appropriate management is –
a. Avoid use of lens for 48 - 72 hrs
b. Antibiotic and cycloplegic
c. Change the contact lens
d. Send the lens for culture and sensitivity

459. After maximum correction ,the vision of RE is 6/36 and left eye is 6/6 and with 66 cm retinoscopy RE is +4.5 D and LE is 1.5 D with normal fundus. Most likely cause of defect of vision-
a. Refractive error
b. Amblyopia
c. Optic neuritis
d. Anisometropia

460. A child was taken to a doctor by his mother complaining that there is decrease in his school performance, his teacher says that he frequently squeezes his eyes and says that there is difficulty in seeing the black board. What is most probable diagnosis-
a. Myopia b. Hypermetropia
b. Presbyopia d. Astigmatism

461. Basanti, a 20yr old female presents with complaints of difficulty in reading near print. On examination there is ptosis and diplopia on looking in all direction. What is the most probable diagnosis
a. Lateral rectus palsy
b. Oculomotor palsy
c. Presbyopia
d. Myasthenia gravis

462. A 16yr old boy complains of pain in right eye. After refraction, he was prescribed a +3.5 D sphere lens in right and zero in left eye. The cover test is normal. There is no heterophoria. The diagnosis is-
a. Organic Amblyopia
b. Anisometropic Amblyopia
c. Emmetropic Amblyopia
d. Toxic Amblyopia

463. A 14yr old boy complains of pain during reading. On examination his both eyes are normal and vision with snellen's distant chart is 6/5. He still complains of pain on occluding one eye. The diagnosis is
a. Myopia c. Pesudomyopia
b. Hyperopia d. Emmetropia

451. c	452. b	453. a	454. c	455. c	456. d	457. b	458. a	459. b	460. a
461. d	462. b	463. b	464. a						

464. Retinoscopy is done on a 0.5 D myopic patient at a distance of 1 metre. Movement of image will be -
a. Move with the mirror
b. Move opposite to the mirror
c. No movement of image with the mirror
d. Image can move on any side

465. A soft contact lens user has keratitis. Most likely cause is:
a. Acanthamoeba ulcer
b. Erosion of cornea
c. Pseudomonas infection
d. Herpes infection

466. A 35yrs old hypermetrope is using 1.5 D sph both eyes. Whenever his glasses slip downward on his nose, he will feel that his near vision:
a. Becomes enlarged
b. Becomes distorted
c. Becomes decreased
d. Becomes the same

467. Eye is deviated laterally and downwards, patient is unable to look up or medially, likely nerve involved is:
a. Trochlear b. Trigeminal
b. Oculomotor d. Abducens

468. Defect in Amblyopia lies in:
a. Lateral genuculate body
b. Afferent pupillary reflex
c. Rods and cones
d. Retina

469. Visual acuity is test of:
a. Light sense b. Color sense
c. Contrast d. Form sense

470. Yoke muscles for dextroelevation are:
a. Right IR and Left SO
b. Right SR and Left IO
c. Right SO and Left IR
d. Right IO and Left SR

471. Distant direct ophthalmoscopy is done at a distance of:
a. 15cm b. 25cm
c. 50cm d. 1metre

472. Hirschberg test is used to detect:
a. Squint
b. Visual acuity
c. Retinal defect
d. Optic neuritis

473. Most common type of color blindness is:
a. Protanopes b. Deuteranopes
c. Tritanopes d. None

474. Which of the following combination is false:
a. SR and SO are intorters
b. SR and IR are adductors
c. SR and SO are abductors
d. IR and IO are extorters

475. Eye achieves adult size by:
a. 1 year
b. 2 year
c. 13 year
d. 4 year

476. In a mixed type of accommodative esotropia
a. Child has normal AC/A but high refractive error
b. Child has abnormal AC/A ratio and normal refraction
c. Child has both increased AC/A and increased refraction for age
d. None of the above

477. Maddox wing is used for:
a. Measuring the amount of heterotropia
b. Measuring the amount of heterophoria
c. Measuring the amount of hypertropia
d. Measuring the amount of hyperphoria

478. Which of the following is not a cycloplegic
a. Phenylephrine
b. Atropine
c. Homatropine
d. Cyclopentolate

479. Secondary deviation follows:
a. Donders law b. Listing law
c. Hering's law d. Sherrington's law

465. c	466. a	467. c	468. a	469. d	470. b	471. b	472. a	473. b	474. c
475. c	476. c	477. b	478. a	479. c					

480. If the length of the eyeball decreases by 1mm ,power will change by;

a. 1D
b. 2D
c. 3D
d. 4D

481. Which of the muscles does not arise from the apex of the orbit:

a. SO
b. IO
c. IR
d. SR

482. Which instrument is based on the principle of first purkinje images:

a. Retinoscope
b. Slit lamp
c. Cross-Cylinder
d. Keratometer

483. Most rapidly acting cycloplegic is;

a. Atropine
b. Tropicamide
c. Homatropine
d. Cyclopentolate

484. Maddox rod is:

a. Series of fused cylindrical glasses
b. Series of fused prisms of increasing length
c. Series of fused prisms of decreasing length
d. Series of alternating spherical and cylindrical glasses

485. An aphakic with spectacle correction will see an increase in image size of:

a. 5%
b. 10%
c. 20%
d. 30%

486. A patient has a spectacle correction of -6D and -8D.He has started seeing some opacities floating in front of his eye and that his vision is decreased in the last few days. What is the best investigation?

a. Retinoscopy
b. Refraction
c. Indirect ophthalmoscopy
d. Distant direct ophthalmoscopy

487. Retinoscopy is done at a distance of:

a. 50cm
b. 55cm
c. 60cm
d. 66cm

488. Soft contact lens leads to all of the following except;

a. Acanthamoeba
b. Corneal vascularisation
c. Papillae formation
d. follliculosis

489. Sudden increase in blood sugar in diabetes causes;

a. Myopia
b. Presbyopia
c. Anisometropia
d. Astigmatism

490. If retinoscopy is done at 1m distance,the correction factor used while prescribing the glasses is -1D with retinoscopy performed at a distance of 50cm, the correction factor will be:

a. -2D
b. -1D
c. -1.5D
d. +1D

491. When an aphakic eye is corrected with multifocal IOL what will happen:

a. Distant vision obtained
b. Both distant and near vision are corrected.
c. Distant vision and field of vision are corrected
d. All of the above

492. Pincushion distortion with aphakic glasses is due to :

a. Periphery of the lens magnifying more than the centre of the lens
b. Centre of the lens magnifying more than the periphery of the lens
c. Thickness of the lens
d. Size of the lens

480. c	481. b	482. d	483. b	484. a	485. d	486. c	487. d	488. d	489. a
490. a	491. c	492. a						

493. Miotics are used in :

a. Divergent squint
b. Convergent squint
c. Paralytic squint
d. All

494. Maximum refraction takes place between

a. Air tear film
b. Tear film and cornea
c. Cornea and aqueous
d. Aqueous and lens

495. Definition of blindness according to WHO:

a. Less than 1/60
b. Less than 3/60
c. Less than 6/60
d. Less than 6/18

496. PINHOLE NEUTRALISES

a. 1D b. 2D
c. 3D d. 4D

497. A myope with power of -3D will have minification of image by

a. 2%
b. 4%
c. 6%
d. 8%

493. b	494. a	495. b	496. c	497. c

Squint and Optics – Explanations

435. C. Esotropia

Uncrossed diplopia is seen in convergent squint. It may be seen in esophoria also when the eyes are dissociated. Esotropia is a better option than esophoria

436. C. Silicone

Gas-permeable contact lenses are made of fluorosilicone acrylate, siloxane acrylate

437. A. 6 mth

Foveal fixation develops in 4-6moths

438. B. Uncrossed diplopia

LR palsy results in a convergent squint producing uncrossed diplopia

439. C. Intra -ocular lens

Secondary implantation of IOL is the best method to manage aphakia.

The IOL may be posterior fixated iris-claw PC-IOL, scleral-fixated PC-IOL or AC-IOL(not recommended nowadays).

440. B. Corneal curvature

Cornea contributes 2/3 of the total refractive power of the eyeball and this is mainly due to its anterior curvature.

1mm change in radius of curvature of cornea would result in 6D change in refractive power

441. C. 58D

The total power of the reduced eyeball is around +58to +60D

442. B. Paralytic squint

Secondary deviation is more than primary deviation in paralytic squint. Paralytic squint is one of the examples of incomitant squint. So, paralytic is the best option here.

443. B. Anisometropic

Anisometropic amblyopia is the MC type of amblyopia. Hypermetropia is more for amblyopia

444. B. Occlusion of one eye

Occlusion of the good eye with proper refractive correction oth amblyopic eye is the management of anisometropic amblyopia in children. Anisometropic amblyopia is the MC type of amblyopia.

445. C. Refractive correction

Full hypermetropic correction needs to be given in case of accommodative esotropia

446. A. <5 yr of age

Amblyopia can be corrected upto 12 years of age according to the recent PEDIG study group findings

Amblyopia can be successfully treated in 7 to 12 year-old children using either 2 hours of daily patching or weekend atropine as the initial treatment.

Although many older children respond to treatment, amblyopia is more responsive to treatment in children younger than 7 years of age compared with children 7 to 12 years of age

447. C. Primary deviation = secondary deviation

IN paralytic squint, secondary deviation is more than primary deviation.

448. C. Intumescent cataract

Fluctuating refractive error is seen in intumescent

449. C. IR

Inferior rectus causes depression of abducted eyball

Sr causes elevation of abducted eyeball

450. B. Hypermetropic

Newborn eyeball is short.

This results in a physiological axial hypermetropia of +2 to +3D

451. C. Stereopsis

Stereopsis is lost whenever there is a squint

452. B. Face turn to left

In right LR palsy, there is face turn to right

453. A. Intorsion

Primary action of SO is intorsion
Secondary and tertiary actions of SO are depression and abduction respectively

454. C. Electroretinogram

ERG per se is not a macular function test.
Multifocal ERG specially evaluates macula

455. C. Pseudomonas infection

Soft contact lens users have a high risk of Pseudomonas infection because of the organisms's ability to form biofilm.

456. D. Posterior surface of lens

The fourth Purkinje image formed by the posterior surface of lens is real and inverted.

457. B. 15 times

Direct ophthalmoscope produces 15times magnification of images.

458. A. Avoid use of lens for 48 - 72 hrs

contact Lens Overwear Syndrome (also known ascontact lens-induced acute red eye, CLARE, or tightlens syndrome) is the result of patients over-extending their contact lens wearing time or by wearing their contact lenses in a closed eye environment (during sleep)

459. B. Amblyopia

RE vision is much reduced compared to LE. It is also given that the refractive error in RE is much higher, that is 3D more hypermetropia than the LE. so, there is anisometropia leading to RE amblyopia. AMBLYOPIA is the cause of defective vision here.

460. A. Myopia

Myopia Difficulty in seeing blackboard (decreased vision for far bojects), frequently squeezing his eyes to get a pinhole effect.

461. D. Myasthenia gravis

Myasthenia gravis is a great mimicker!! Muscle weakness - diplopia in any gaze is possible. Young age n no mention of pupil - MG more likely. Difficulty in near vision is due to the weakness of MR resulting in poor convergence.

462. B. Anisometropic Amblyopia

is a clear case of anisometropia - difference in refracive error between the two eyes. Anisometropia more than 1.5D in a hypermetrope is amblyogenic. Answer is Anisometropic Amblyopia as a 3.5D hypermetrpic anisometropia is definitely amblyogenic.

463. B. Hyperopia

Good distant vision and asthenopic symptoms during near work is suggestive of hypermetropia
Pseudomyopia is when accomodation spasm occurs during nearwork.. It can cause the pain after nearwork but definitely the distant vision cannot be 6/5 because the image moves further forward into the vitreous!!!

464. A. Move with the mirror

With movement of the reflex is seen in myuopia less than -1D when retinoscopy is done from one metre distance under no cycloplegia.

465. C. Pseudomonas infection

Soft contact lens users – the MCC of corneal ulcer or keratitis is Pseudomonas

466. A. Becomes enlarged

467. C. Oculomotor

Oculomotor nerve palsy casues down and out deviation of eyeball

468. A. Lateral genuculate body

In amblyopia, functional deficits are noted in lateral geniculate body where the visual information from the two eyes are processed.

469. D. Form sense

470. B. Right SR and Left IO

Right SR elevates the abducting right eye ad left IO elevates the adducting left eye resulting in dextroelevation.

471. B. 25cm

When done at a distance of 25 cm for distant direct examination, we observe a real inverted unmagnified image of the fundus and this helps in detecting opacities in the media.

472. A. Squint

Hirschberg corneal reflex test, is a screening test to assess if the eys are misaligned(squint)

473. B. Deuteranopes

Most common type of color defect is deuteranomaly (defect in green color)

474. C. SR and SO are abductors

Tertiary action of SR is adduction whereas the tertiary action of SO is abduction

475. C. 13 year

Eyeball reaches the adult size (axial length of 24mm) by 13 years of age

476. C. Child has both increased AC/A and increased refraction for age

477. B. Measuring the amount of heterophoria

478. A. Phenylephrine

Phenynlephrine is only a mydriatic, not a cycloplegic

479. C. Hering's law

Hering's law of equal innervation of yoke muscles explains the secondary deviation being higher than the primary deviation in case of paralytic squint.

480. C. 3D

1mm Change in axial length would result in 3D change in refractive power.

481. B. IO

Inferior oblique is the only muscle that does not areise form the apex. It arises from the floor of the orbit.

482. D. Keratometer

Keratometer measures the curvature of the anterior surface of the cornea based on reflection of light – first Purkinje image

483. B. Tropicamide

Torpicamide has the most rapid onset of action and alsoe the least duration of action (6hours)

484. A. Series of fused cylindrical glasses

485. D. 30%

An aphakic requires a +16D lens for correction. Every +1D causes 2% magnification of image.

486. C. Indirect ophthalmoscopy

The patient is a high myope and has the risk of retinal tear and rhegmatogenous retinal detachment. Indirect ophthalmoscopy is the best instrument to visualize the retinal periphery where retinal breaks are common.

487. D. 66cm

Retinoscopy may be done at a distance of 1m, 66 cm or 50 cm with appropriate correction factors for the working distance. 66cm is a common working distance for practical convenience.

488. D. Follliculosis

Soft contact lens users are prone to develop Acanthamoeba keratitis if they resort to unhygienic cleaning practices. Corneal vascualrisation develops due to the hypoxia and they may also develop giant papillary conjunctivitis.

489. A. Myopia

The osmotic imbibition of water causes intumescence of the lens and curvatural myopia

490. A. 2D

Correction factor is inverse of working distance(in metre)

491. C. Distant vision and field of vision are corrected

Multifocal IOL corrects for all distacnes (distance, near and also intermediate distances)

492. A. Periphery of the lens magnifying more than the centre of the lens

This is due to prismatic effect of high-power lenses as in aphakic glasses.

493. B. Convergent squint

Miotics may be used in accommodative esotropia as miotics cause accommodative spasm.

494. A. Air tear film

The maximum refraction occurs at the air-tearfilm interface

495. B. Less than 3/60

496. C. 3D

Pinhole can neutralise upto 3D of ametropia as the peripheral rays are cut off.

497. C. 6%

For every, there is 3% change in magnification. Plus lenses cause magnification and minus lenses cause minification. 3D would cause 9% minification.

Retina – Questions

498. Amsler Grid chart is used for testing:

a. Angle of primary deviation
b. Angle of secondary deviation
c. Macular function
d. Optic nerve function

499. Earliest ophthalmoscopic sign of diabetic retinopathy is:

a. Hard exudates
b. Vitreous haemorrhage
c. Dot haemorrhagev
d. Microaneurysms

500. The commonest cause of rubeosis iridis is:

a. Diabetes mellitus
b. Central vein occlusion
c. Central retinal artery occlusion
d. Carotid stenosis

501. Which type of retinal break is more likely to result in RD:

a. Symptomatic superior horse-shoe break
b. Asymptomatic horse-shoe break
c. Symptomatic round hole
d. Lattice degeneration

502. Amaurotic cat's eye reflex is seen in all of the following except:

a. Retinoblastoma
b. Cyclitic membrane
c. Endophthalmitis
d. Granulomatous iridocyclitis

503. All are true regarding Eales disease except:

a. Occurs in young
b. Vitreous haemorrhage
c. Vascular sheathing
d. Optic neuritis

504. Cattle-truck appearance is seen in

a. CRAO b. CRVO
d BRAO d. BRVO

505. For flourescein angiography of retina, dye is injected in:

a. Femoral artery
b. Antecubital vein
c. Ophthalmic artery
d. Internal carotid artery

506. Cause of acute loss of vision in patient of alcoholic pancreatitis is:

a. Purtscher's retinopathy
b. Sudden alcohol withdrawal
c. Acute congestive glaucoma
d. CRAO

507. Sauce and cheese retinopathy is seen in:

a. CMV
b. Rubella
c. Toxoplamosis
d. Congenital syphilis

508. All are fundus findings of diabetic retinopathy except:

a. Microneurysms
b. Retinal haemorrhage
c. Arteriolar dilatation
d. Neovascularisation

509. Laser photocoagulation affects which layer of the retina:

a. Layer of rods and cones
b. Retinal pigment epithelium
c. Inner plexiform layer
d. Nerve fibre layer

510. Pepper salt fundus is seen in:

a. Multiple sclerosis
b. Cystinosis
c. Weil marchesani syndrome
d. Congenital syphilis

498. c	499. d	500. a	501. a	502. d	503. d	504. a	505. b	506. a	507. a
508. c	509. b	510. d						

511. Toxic maculopathy occurs due to all except:

a. Tamoxifen b. Chloroquine
b. Thioridazine d. Steroids

512. Cherry-red spot over retina is seen in all except:

a. Tay sach's disease
b. Neimann pick disease
c. CRAO
d. Batten Mayo syndrome

513. Thinnest part of retina is:

a. Optic disc
b. Fovea centralis
c. Ora serrata
d. Mid-Peripheral retina

514. Diabetic retinopathy is common in:

a. NIDDM of 2 year duration
b. IDDM of 2 year duration
c. Juvenile onset diabetes before puberty
d. Pregnancy induced gestational diabetes

515. The laser procedure most often used for treating iris neovascularisation is:

a. Goniophotocoagulation
b. Laser trabeculoplasty
c. Pan retinal photocoagulation
d. Laser iridoplasty

516. Fundus of a young patient shows pigment along retinal midperiphery and waxy pale disc. The diagnosis is:

a. Retinitis pigmentosa
b. Diabetic retinopathy
c. Central serous retinopathy
d. Lattice degeneration of retina

517. A 66-year old elderly male present with heart disease and has sudden loss of vision in one eye, examination reveals a cherry red spot over the fundus, the likely diagnosis is:

a. Central retinal vein occlusion
b. Central retinal artery occlusion
c. Amaurosis fugax
d. Acute ischemic optic neuritis

518. Most common cause of blindness in non-proliferative diabetic retinopathy is:

a. Sub-retinal haemorrhage
b. Macular edema
c. Retinal detachment
d. Vitreous haemorrhage

519. Henle's layer is:

a. Outer Nuclear layer
b. Outer plexiform layer
c. Inner Nuclear layer
d. Inner plexiform layer

520. Posterior segment feature of Hypertensive Retinopathy include all except:

a. Macular star
b. Cotton wool spots
c. Microaneurysms
d. Elschnig spots

521. Cystoid macular edema involves dysfunction in

a. Outer blood retinal barrier
b. Inner blood retinal barrier
c. Both of the above
d. None

522. ETDRS vision chart study is done in patients with diabetic retinopathy. ETDRS stands for:

a. Emergency treatment for diabetic retinopathy and study
b. Eye testing on rotatory drum and its study
c. Extended therapy for diabetic retinopathy and its study
d. Early treatment for diabetic retinopathy study

523. A young male presented with sudden painless loss of vision. He recovered spontaneously within 3 months. Most likely cause.

a. Central serous retinopathy
b. Macular hole
c. Myopic crescent
d. Vitreous haemorrhage

511. d	512. d	513. c	514. a	515. c	516. a	517. b	518. b	519. b	520. c
521. b	522. d	523. d							

524. The colors best appreciated by the central cones of our foevo- macular area are:
a. Red and Blue
b. Blue and Green
c. Red and Green
d. Blue and Yellow

525. Night blindness occurs in all except:
a. Retinitis pigmentosa
b. High myopia
c. Vitamin A deficiency
d. Tobacco amblyopia

526. Photoretinitis is seen with:
a. Ultra violet rays
b. Infrared ray
c. Gamma rays
d. X-rays

527. Significant loss of vision in a patient with hypertension can occur due to all of the following except:
a. Occipital infarct
b. Anterior ischemic optic neuropathy
c. Papilloedema
d. Retinal haemorrhage

528. All of the following are features of CRVO except:
a. Gross impairment of vision
b. Severe pain in the eye
c. Superficial haemorrhages in fundus examination
d. Markedly dilated veins

529. Which of the following staphyloma occurs in high myopia:
a. Ciliary staphyloma
b. Posterior staphyloma
c. Anterior staphyloma
d. Intercalary staphyloma

530. Normal ratio of size of arteries and veins in fundus is :
a. 2:3 b. 3:2
b. c. 1:1 d. 3:5

531. In RD fluid accumulates between:
a. Layers of OPL and INL
b. Neurosensory retina and RPE
c. NFL and rest of the retina
d. Between RPE and Bruch's membrane

532. Hard exudates are found in:
a. OPL b. INL
c. IPL d. Ganglion cell layer

533. Retinopathy of leukemia includes all the following except:
a. Dilated and tortuous retinal veins
b. Roth spots
c. Retinal haemorrhage
d. Foster fuch spots

534. Angiod streaks are seen in all except:
a. Paget's disease
b. Pseudoxanthoma elasticum
c. Ehler Danlos syndrome
d. Myopic maculopathy

535. Retinal detachment with photopsia and floaters are seen in:
a. Rhegmatogenous RD
b. Exudative RD
c. Tractional RD
d. Vitreous haemorrhage

536. ICG angiography is best indicated for:
a. Classical ARMD
b. Dry ARMD
c. Occult ARMD
d. Wet ARMD

537. Gyrate atrophy of choroid is characterized by:
a. Hyperornithinemia
b. Hypoornithinemia
c. Macular degeneration
d. None of the above

538. Sun-burst spots are seen in:
a. DM
b. HT
c. Eale's disease
d. Sickle-cell anaemia

539. In ERG 'a' wave is due to:
a. Bipolar cells
b. Ganglion cells
c. Rods and cones
d. NFL

524. c	525. d	526. b	527. c	528. b	529. b	530. a	531. b	532. a	533. d
534. d	535. a	536. c	537. a	538. d	539. d				

540. Vitreous haemorrhage is a feature of all except:

a. Proliferative DR
b. NPDR
c. CRVO
d. Sickle-cell anaemia

541. Most common finding in retinopathy in toxaemia of pregnancy is:

a. Arterial spasm
b. Hard exudates
c. Soft exudates
d. Macular star

542. 100 day glaucoma is a feature of:

a. CRAO b. CRVO
c. CSR d. CME

543. The normal ratio of light peak and dark trough on an EOG

a. 1
b. 1.5
c. More than 1.85
d. Less than 1.85

544. The development of subretinal demarcation lines (high water marks) in the retina is indicative of–

a. Longstanding retinal detachment
b. Fresh retinal detachment
c. Retinal tumour formation
d. Normal retinal finding

545. A 7-year old male child presents with normal vision 6/6 in the right eye and hand movement perception close to the face in the left eye. On fundoscopy, his right eye was normal and left eye showed retinal detachment, subretinal yellowish exudates and telangiectatic vessels. The most likely diagnosis is–

a. Coat's disease
b. Sympathetic ophthalmitis
c. Familial exudative vitreoretinopathy
d. Retinopathy of prematurity

546. Arden index is used for interpretation of:

a. Visual evoked response
b. Electrooculogram
c. Electroretinogram
d. Visual field charting

547. Hollenhorst plaque is composed of:

a. Cholesterol b. Calcium
c. Platelets d. Talc

540. b	541. b	542. c	543. b	544. a	545. a	546. b	547. a

498. C. Macular function

Amsler's grid is one of the macular function tests and is used as home screening tool for ARMD patients.

499. D. Microaneurysms

Microaneurysms are saccular outpuchings of retinal capillaries found mainly in the inner nuclear layer. The first sign of diabetic retinopathy

500. A. Diabetes mellitus

Proliferative diabetic retinopathy(PDR) is the MCC of rubeosis iridis or neovascularization of iris(NVI)

501. A. Symptomatic superior horse-shoe break

Although all the options cause retinal breaks, superior horse-shoe shaped break is the most likely lesion to result in a rhegmatogenous RD.

502. D. Granulomatous iridocyclitis

All are differential diagnosis of leukocoria except granulomatous iridocyclitis which by itself does not cause whitish reflex at the pupil

503. D. Optic neuritis

Eale's disease presents with recurrent vitreous hemorrhage in apparently healthy young adult males. There is vasculitis- vascular sheathing and tractional-rhegmatogenous RD

504. A. CRAO

this is seen in the retinal veins in CRAO. It is also describes as "boxcar appearance"

505. B. Antecubital vein

the flusorescein dye of 5% concentration is injected into the antecubital vein

506. A. Purtscher's retinopathy

Pancreatitis can cause Purtscher-like retinopathy bilaterally

507. A. CMV

The findings of CMV chorioretinitis is describes as "sauce and cheese" appearance

508. C. Arteriolar dilatation

Venous dilatation is seen in diabetic retinopathy

509. B. Retinal pigment epithelium

the retinal laser targets the RPE where it gets absorbed by the melanin and results in heating of the tissues - coagulation

510. D. Congenital syphilis

Sala and pepper retinopathy may be seen in congenital syphilis and congenital rubella

511. D. Steroids

Tamoxifen causes crystalline maculopathy

Chloroquine causes bull's eye maculopathy

512. D. Batten Mayo syndrome

In Batten-Mayo disease, a bull's eye-like maculopathy is seen

513. C. Ora serrata

Ora serrate is the thinnest part of the retina followed by the foveola

514. A. NIDDM of 2 year duration

Diabetic retinopathy is dependent on the duration of diabetes and due to the ate diagnosis of type 2 diabetes, it is presumed to be present even at diagnosis and therefore, requires screening immediately upon diagnosis.

515. C. Pan retinal photocoagulation

panretinal photocoagulation addresses

the underlying the retinal hypoxia causing the NVI

516. A. Retinitis pigmentosa

Ths is a typical fundus picture of retinitis pigmentosa. The triad of fundus findings are areteriolar attenuation, black pigmentation in midperipheral retina, waxy pallor of optic disc.

517. B. Central retinal artery occlusion

This is a typical presentation of central retinal artery occlusion. Carotid occlusive disease and atrial fibrillation are major causes of emboli causing the obstruction at lamina cribrosa.

518. B. Macular edema

macular edema is the most common cause of visual loss in diabetics overall and in NPDR.

519. B. Outer plexiform layer

OPL at the foveal region is called Henle's layer and is characterized by the oblique arrangement of the axons

520. C. Microaneurysms

Macular star is a radial arrangement of hard exudates in the macula. Seen in grade IV

Elschnig spots are choroidal infarcts due to choroidal ischemia

Cotton wool spots are RNFL infarcts due to retinal ischemia

521. A. Outer blood retinal barrier

extracellular edema of OPL occurs in CME due to breach in the inner barrier.

522. D. Early treatment for diabetic retinopathy study

523. D. Vitreous haemorrhage

Eale's disease presents with recurrent vitreous hemorrhage in apparently healthy young adult males. There is vasculitis- vascular sheathing and neovascularization which bleeds recurrently.

524. C. Red and Green

This is because the blue cones are absent in the foveola

525. D. Tobacco amblyopia

RP, high myopia, Vitamin A deficiency, advanced glaucoma are all causes of night blindness or nyctalopia

526. B. Infrared ray

Photoretinitis or solar maculopathy is due to infrared rays affecting the foveola

527. C. Papilloedema

papilledema per se does not decrease vision

528. B. Severe pain in the eye

CRVO is cahracterised by a subacute painless decrease in vision due to the macularedema that occurs.

529. B. Posterior staphyloma

High myopia is the MCC of posterior staphyloma

530. A. 2:3

Retinal arterioles are a little thinner compared to retinal veins

531. B. Neurosensory retina and RPE

The serous fluid accoumulates in the subretinal space between the RPE and the inner neurosensory retina

532. A. OPL

533. D. Foster fuch spots

Foster Fuch spots are seen in pathological myopia

534. D. Myopic maculopathy

Angioid streaks are ruptures of Bruch's membrane. Ruptures of Bruch's membrane seen in myopic maculopathy are called lacquer cracks

535. A. Rhegmatogenous RD

This is the typical presentation of acute rhegmatogenous RD

536. C. Occult ARMD

FFA is used to diagnose CNVM. But in occult ARMD, it is best diagnosed using ICG angiography.

537. A. Hyperornithinemia

Gyrate atrophy caused by mutations in the OAT gene and is inherited in an autosomal recessive inborn error of ornithine metabolism, caused by

decreased activity of the enzyme ornithine aminotransferase. There is elevated blood levels of ornithine.

538. D. Sickle-cell anaemia

It is a feature of sicke cell retinopathy

539. C. Rods and cones

The a wave of ERG originates from photoreceptors and reflects their activity.

540. B. NPDR

In NPDR there is no neovascualrisation and hence no chance of vitreous hemorrhage

541. A. Arterial spasm

PIH retinopathy is characterized by vasoconstriction resulting in arteriolar spasm

542. B. CRVO

100 day glaucoma is a neovascular glaucoma seen in CRVO. It is also known as 90-day glaucoma

543. C. More than 1.85

Arden ratio more than 1.85 is normal
Less than 1.50 is abnormal

544. A. Longstanding retinal detachment

Demarcation line develops in those patients who have more longstanding (or chronic) retinal detachments. A pigmented demarcation line can be seen at the junction between attached and detached retina

545. A. Coat's disease

This is a typical presentation of Coat's disease. Coat's disease presents usually in a male child with unilateral leukocoria with hard exudates, telangiectasias and serous retinal detachment.

546. B. Electrooculogram

EOG reflects activity of retinal pigment epithelium (RPE). Arden's index is a ration of the light peak and trough.

547. A. Cholesterol